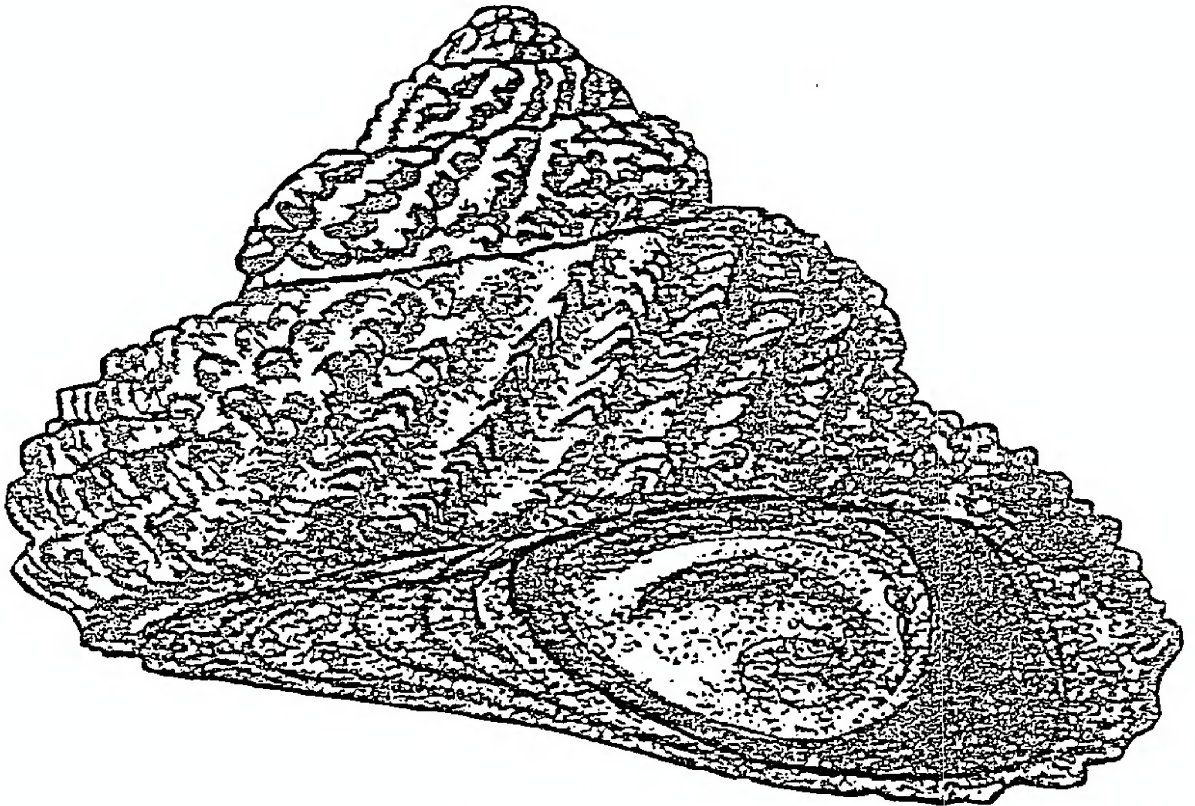


COOKIA



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CONTENTS

Wellington Shell Club - how it happened	R.K. Dell
Occurrence of <i>Nerita melanotragus</i> round Wellington	J. Raven
Tory Channel - dredging and diving 1981 to 1983	D. Watson
A whopper of a bivalve: the story of <i>Acesta</i> (Limidae)	E. Dawson
"Shell" - Associations with a famous company	E. Dawson
Nelson in the 1980s	J. Burnet
F.W. Hutton: his new species of Mollusca	E. Dawson
From Napier to Te Puke - the long way round	B. Andrews
A new name for the "Toe-nail" brachiopod; and a new species to watch for	E. Dawson
Records of small landsnails from Mana Island	I. Townsend
Titahi Bay field trip 1995	J. Burnet
Wellington Shell Club field trip - Seatoun 1991	J. Burnet
In Memoriam: Peter Robin Jamieson (1956 - 1995)	J. Raven
List of members, 1995	

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THE WELLINGTON SHELL CLUB - HOW IT HAPPENED

By R.K. Dell

[A talk to the Wellington Shell Club on 23 September 1993]

When I thought about this I almost called it "Accident and Persistence" or "Blind Chance and Pigheadedness." I don't believe on Fate or Predestination, but I might easily say that Fate decided you were going to get a Shell Club ...

I hope you won't think that my talk this evening revolves too much and too closely around me but, by taking this approach, I can more graphically describe the world I was growing up in and the people who influenced me, how I got to Wellington and how it was when I got there.

I grew up on a small farmlet near Avondale in Auckland. My father worked the usual five and a half day week in an office but we also had about four acres of land, and ran one cow, one pig, chickens, ducks and goats. Some of the back section was still in gorse and manuka, a haven for bird life. I became interested in birds and fish, collected bones and odd bits of shells - it was fairly near the beach.

When I was in the 4th Form, 13 years old, a slightly older friend and I decided we would make a museum in half an old fowl house. We had been collecting birds' nests, bones and occasional shells. My friend said - "You look after the birds and the animals and I'll look after the shells and marine things." And that's just where the pigheadedness starts - because I said to myself "I'm going to do the shells." But, of course, it wasn't as easy as that. How do you start to find out about them, even to find out their names? There were no popular works in those days. Mt Albert Grammar School had a good library and a rather advanced policy towards its use - we had one period a week in the library. So I looked up a large encyclopaedia and found "Shells", which said "see Mollusca". There were a few drawings and I could identify my limpets as *Patella* and my cockles as *Cardium* but my whelks didn't look like *Buccinum*. I sounded quite learned for a while - then I discovered that New Zealand shells were not the same as European ones. When I found Powell's displays of shells in the Auckland Museum I spent many hours there with a notebook.

My family accepted that they had an only child with a growing mania. Somehow that Christmas they discovered Bucknill's book and bought it for me. It was the only semi-popular book available, but it was biased towards the Bay of Plenty.

Early in 1936, I saw a newspaper account, about three inches of type, about a meeting of a club for shell collectors in the Auckland Museum, organised by Mr Powell. I plucked up enough courage to write to him asking if children could belong. I received back a welcoming note and a copy of the year's programme. I went to the next meeting - and a new world opened up. I used to get to the monthly meetings on my own but the Auckland Domain was a lonely place at night and for the first year my father used to make the long trip from Avondale to the museum by train to collect me after the meetings.

Baden Powell had started this club as a Boys' Club but soon changed it to a general one. Meetings were organised into three sections: firstly an informal identification period, secondly a study group with the museum collection displayed, and thirdly a more formal type lecture. The lectures in these first few years were usually given by Powell himself.

Towards the end of that year there were further developments. Somehow my parents found out about Suter's *Manual* and obtained one for me as a Christmas present. The two volumes were then still available from the Government Printer for the original publisher's price of 15 shillings. I read it like a novel, and couldn't believe my luck.

Then, at the last meeting of the Shell Club for the year, Baden Powell told us that the Museum had bought the Finlay collection. He was starting to unpack it and showed us some of it. I was a very shy 16-year-old, but, again, I plucked up enough courage to ask if he needed any help to unpack it. He carefully explained that you needed special knowledge to do such a job, but said there were lots of jobs in the Museum that someone like me could do. So throughout subsequent school and university holidays I spent several days a week sorting shell sand and dredgings, splitting into species lots, cleaning shells and fossils etc. I even learned to develop the old photographic plates, and one of my pictures was actually published. Above all else, I learned how a museum worked, how to deal with literature, the general care and maintenance of the collection, and, of course, I handled a great many species that I had never seen before. In addition, the occasional duplicate was handed over as the only concrete recompense. As it turned out, this was to be a kind of apprenticeship.

The next year, 1937, I went to Auckland University to start work for a B.A. degree. I had already met Charles Fleming and a couple of other university people at the Shell Club, and it was good to have some friends in that new world.

The University, of course, had a proper library. Charles Fleming showed me where the *Transactions* were shelved, and I started to read the papers on shells in them - Volume 57 took me several weeks! At this stage I was aiming at being a teacher although my parents still had hope that I would end up as a journalist.

Then there were two years of Training College, where one of the teachers was a fossil expert, C.R. Laws. In my second year there I became Secretary of the Auckland Shell Club. In 1940 I was 20 years old, still Secretary of the club, doing my first year of teaching, finishing my B.A. degree, and aware that I would be in the Army the next year. In 1941 I was. I spent much of that year in the Army, including three months at Waiouru. In 1942 my Territorial unit spent most of its time preparing to save New Zealand from invasion, and then I was transferred to the 2 NZEF and sent to New Caledonia. Here I was in the operations room for an anti-aircraft establishment guarding an operational airport. We worked two hours on and four hours off day and night with a day off a week if we were lucky, living in the same tent and working in the same hole in the ground for a year.

By sheer luck, one of our team of 10 was Vic Fisher who was ethnologist at the Auckland Museum. We were sometimes able to spend our day off together, collecting shells, pottery shards etc. in the middle of nowhere. But there wasn't anywhere to keep anything - we only had our kitbags. By special arrangement I was able to send some small consignments of shells back to the Auckland Museum, where Baden Powell undertook to look after them until our return. Opportunities for collecting were very limited. Our closest contact with the sea was about five miles away, and we had to walk it. The first time I collected there and turned over a coral block, I disturbed a very large sea snake. We discovered that it was a major breeding ground for them there. It was difficult to obtain information about New Caledonia. We had no access to any literature, and letters home were censored. On leave in Noumea, I found some books in the museum on the natural history of New Caledonia but they were in German.

From New Caledonia we went north to the Solomons, Guadalcanal, Mono Island, and Nissen Island, doing much the same job until, on Nissen, I got transferred to the administrative side and worked regular hours. On this island I ended up living in a tent half a stone's throw from a lagoon with the first real chance of collecting shells, but still with severe restrictions on how many I could send back to New Zealand - can you imagine a worse torture? There was no preservative but there was, of course, that marvellous help to clean shells in the tropics - the ants' nest! It worked wonderfully well for a while. Then tragedy struck - instead of the pile of beautiful live snails hidden under the leaves there was an equivalent pile of broken, worn specimens. I was fraught with consternation and suspicion - until I caught the culprits. Land hermit crabs were swapping their old shells for my nice fresh ones!

Then, towards the end of 1944, we went back to New Caledonia, then back to New Zealand to re-group, had Christmas at home, and set off for Egypt and Italy, and Egypt again. Then there was a long wait to see if we were to go to Japan, but no, we were back home again for Christmas 1945.

So, at the beginning of 1946, I was back home, alive and safe, able to get married at last, look for a teaching job, and consider university. I went up to the Auckland Museum to see Baden Powell and say thanks for his help. What does he say but "How would you like to be the Conchologist at the Dominion Museum?" I contacted Dr Oliver, the Director there, and sent in an application supported by Baden Powell. Then I waited and waited and waited. The occasional message came that the job would be mine, but there were budget problems. In the meantime I got married, took relieving teaching jobs, and worked for a B.Sc. part time. A year passed. At the end of it my wife and I decided that we could not live in limbo any longer, and wrote a "decision or else" letter to Dr Oliver. Just when I had given them up, a telegram arrived "Start any time convenient to you - Oliver CT 9". In February 1947, I arrived in Wellington, alone - my wife still had two months notice to serve for her teaching job.

The Dominion Museum had opened in 1936, and had no previous conchologist. Students had worked on the collection, unsupervised. During the war the Armed Forces had taken over the whole of the ground floor and part of the first floor. They had moved in without warning, tipped up boxes and cabinets on their sides and moved them out of the way. Collections and display cabinets were mixed up and there was much damage.

The position of conchologist had arisen through the Museum's acquisition of the Suter collection. This had been left to the Wanganui Museum, which had no conchologist. It was a valuable collection containing many type shells. Charles Fleming persuaded the Geological Survey to purchase it. Dr Oliver said it should go to the Dominion Museum. Fleming pointed out that the Museum had no shell person. Dr Oliver replied that it **would** have one, which was how the job eventuated. The long delay was caused by the problem of finding the money to pay the new person.

The Museum was rather an inconvenient building: steps here and there made shifting things difficult, and the toilets were well hidden. There were no offices - my desk was in front of an arms display. The collections were in all sorts of boxes and there were no standard glass tubes. I got a supply of lingerie boxes which I used for years, and my wife complained that all her preserving jars kept disappearing.

At the end of my first year there, Dr Oliver retired and Dr Robert Falla was appointed Director. He was a bird person and not familiar with what was needed for storing or displaying such things as shells, and it was difficult to get supplies.

During the weekends, I went collecting land snails with Craig O'Connor - the Museum had no land snail collection then. I also spent time collecting fossils in the Wairarapa.

One keen collector who turned up regularly at the Museum was Bill Paul. He was a public servant who worked in Courtenay Place, and about once a week he seemed to find business which took him out of the office and to the vicinity of the Museum. Marwick and Fleming worked at the Geological Survey, which was housed in the most primitive conditions in an old wooden house on The Terrace. They had a magnificent fossil collection there. Marwick was a really fine person, and very helpful with publications. Finlay lived next door to Bill Paul. He was a brilliant person, very highly qualified, but crippled by polio and couldn't get a job. He had a vitriolic tongue, but was very tenacious and didn't give in to his handicap.

Bill Paul kept saying for some time that we ought to have a shell club. I sent out a letter to local enthusiasts to test the interest, and on 26 May 1955 the first meeting was held and the Club formed. There were 8 foundation members, no officers were appointed but I chaired the

meetings and Bill Paul did any secretarial work. The Museum paid the first year's expenses and no subscriptions were charged. Meetings were held on the fourth Thursday of every month and during 1955 I gave all the lectures. In 1956, the Club expanded a bit, holding its first field trip for land snails in Silverstream and having two guest speakers, Dr Fleming and Dr Marwick. By 1960 the Club showed that it was self-supporting while I was away overseas for a year. In 1967 I was appointed Director of the Museum, there was a new conchologist, and I had less spare time. However, I have had a lot of satisfaction from the Shell Club watching the development of the new generation of professionals like Winston Ponder, Alan Beu, Frank Climo, and Bruce Marshall, together with the serious collectors and the amateurs. I am sorry that there seems to be a lack of young people coming along at present. I have found that people feel rather apologetic and embarrassed about shell collecting - they keep quiet about it instead of spreading the interest and drawing others in.

OCCURRENCE OF *NERITA MELANOTRAGUS* ROUND WELLINGTON

By Jenny Raven

Nerita [atramentosa] melanotragus, so common on mid-tide rocks in northern New Zealand, is virtually non-existent round Wellington.

Powell (1979: 80) said of its distribution: "North Island, common in the upper tidal zone, but apparently not found south of Wellington ..."

I remember as a child finding a washed-up one at the southern end of Palmer Bay near Wellington Harbour. I returned to the spot recently and was delighted to find a small colony living on the large smooth rocks of the harbour side of Palmer Head.

A further colony was found on the Shell Club's Titahi Bay field trip of Easter this year (see Jill Burnet's article in this issue of *Cookia*) in the bay south of Onehunga Bay, and a single one was later found living further south at Green Point opposite Mana Island.

REFERENCE

POWELL, A.W. B. 1979: *New Zealand Mollusca. Marine, land and freshwater shells*. Pp 1-500. Auckland: Collins.

TORY CHANNEL - DREDGING & DIVING 1981 to 1993

By Don Watson

Tory Channel seems to be a place where you could collect for a whole lifetime! The following list records what I have found up to 1993. I have only collected what came my way rather than trying to do any one family in detail - so there's a lot to do yet.

Tory Channel lies on the south side of Arapawa Island and forms the ferry route to Picton across Cook Strait from Wellington. The marine fauna is very good but in exploring it you have to be very conscious of the tide as it runs very fast, so it's better to dive on slackening tides. Beach collecting is quite good in some places. Stony beaches are better for *Astraea heliotropium* and you can get live ones in the water at low tide. When you're diving it's hard to find clean ones which seem to occur rather where the silt movement is greatest and encrusting material doesn't settle so easily. In the sandy bays and off the beaches you can spend hours snorkelling but the main thing is to move slowly to give your eyes enough time to see things on the bottom that you might want to pick up, for instance bivalves which often have only a part of them showing. As well as bivalves we have often found *Poirieria zelandica* as well as *Calliostoma waikanae* in such bays. *Calliostoma pellucida* is not so plentiful. I have only found one live one in all the years of collecting but possibly I just haven't found the right place. Normally the shore is very still, the only wave action being from the ferries and other passing craft. The seaweed inside the channel is covered with silt but whether this affects its normal growth is not clear. Outside on the coast where the weed is very clean there are lots of Butterfish but inside, in the channel, there are not a great number. In 1969 when we first started going to the Sounds there was no green lettuce weed in Tory Channel but now in some of the sheltered bays it is nearly a metre deep but whether it has had a choking effect on bivalves I don't know.

Panopea smithae is living in Tory Channel also which I hadn't realised until I studied them properly. The shape is quite different, more rounded plus pallial sinus marking twice as long as in *P. zelandica*. While diving we found *Chlamys gemmulata* and *C. dieffenbachii* quite plentiful and large, to about 54 mm, but they are only in certain areas, from about 20 metres onwards. The best specimens are found where the orange lacecorals (*Hippelozoon novaezelandiae*) live. Sponges live there as well, with the *Chlamys* being enveloped by at least two different kinds. My son Donald and I dived one night and found that feeding on top of the sponges were species of *Buccinulum*, *Calliostoma punctulata*, *C. tigris*, *C. waikanae* and *Glaphyrina caudata*, but diving there during the day we found that they were down in the silt at the base of the sponges. *Cabestana spengleri* was there as well apparently feeding on *Maoricolpus roseus*. *Gari hodgeri* is quite plentiful with some good specimens also of *G. lineolata* in muddy and sandy locations. *Gari stangeri* occurs too but lives in coarser small stony or sandy places. *Cuspidaria willetti* lives in about 30 metres onwards in muddy silt. I haven't dredged *C. trailli* but it is probably there as well. Shells are so often regarded as rare when it's just a matter of finding the right place.

You really need a boat if you going to collect in Tory Channel because there are no roads reaching it. For dredging, of course, the boat is essential but you have to develop the proper skills. For example, you have to be careful not to dredge when the tide is running, never tie the dredge rope to the boat but put a buoy on it so that if it fouls on the bottom you can throw it over and return when the tide slackens to pick the dredge up.

Each year that we went to the Sounds we seemed to find some species we hadn't found before - which made each trip more interesting than the last. In the first year we went, 1969, we stayed at a motel in Waikawa Bay, hired a small dinghy with a Seagull outboard, put two cushions in the bow, laid our six-month-old daughter there and tootled off down Tory Channel. The rocking must have sent her to sleep easily because she slept both there and back and missed

seeing us catch Blue Cod for our tea! We liked going back to Waikawa Bay - it never changed for a long time but now it's become very popular with so many boats that a marina has had to be put in. I took a sample of the first dredgings when they started digging out the bay for the marina in 1983.

Tory Channel is certainly a great place - good for chitons, too, with beautiful anemones living on and between the rocks with sponges and seaweeds, enough to interest anyone, with land snails nearby and birds on the shore as well.

SPECIES COLLECTED 1981-1993:

Dredging (1), diving (2), snorkelling (3) and beach collecting (4)

Live taken (*), depths in feet ('), low-tide (l/t), likely washed off trawler (4+)

<i>Alcithoe arabica</i>	*	3	8'	1986
<i>A. swainsoni</i>	*	2	85'	1992
<i>A. fusus fusus</i>	*	1	100'	1988
"	*	3	8'	1990
<i>Amalda australis</i>		4		1990
<i>A. mucronata</i>	*	4		1990
"	*	1	80'	1986
<i>A. novaezelandiae</i>		1	100'	1987
<i>Austrofusus glans</i>	*	1	145'	1993
"		4		1989
<i>Austromitra rubiginosa</i>		1	80'	1986
<i>A. rubiginosa</i> - <i>rubiradix</i> form		1	100'	1986
<i>Antimelatoma burchanani maorum</i>		1	80'	1986
<i>Antiguraleus</i> sp.		1	80'	1986
<i>Aoteadrillia wanganuiensis</i>		1	100'	1987
<i>Astraea heliotropium</i>		4		1984
"	*	1	85'	1984
<i>Argobuccinum tumidum</i>	*	2	70'	1993
<i>Buccinum linea</i>	*	1	80'	1991
<i>B. pallidum pallidum</i>	*	1	80'	1991
<i>B. vittatum littorinoides</i>	*	3		1988
<i>B. linea flexicostatum</i>		1	100'	1985
<i>Brooksena neozcalanica</i>		1	100'	1983

<i>Brookula corulum</i>		1	100'	1983
<i>Brookula</i> sp.		1	100'	1983
<i>Calliostoma tigris</i>	*	1	70'	1992
"				
"		4		1986
<i>C. punctulata</i>		4		1991
"	*	4		1991
"	*	2	80'	1993
<i>C. pellucida</i>	*	3	10'	1988
"		4		1991
<i>C. waikanae</i>	*	1	108'	1986
"	*	2	65'	1991
"	*	3	10'	1988
"		4		1984
<i>Cabestana spengleri</i>	*	2	70'	1991
"		4		1986
<i>Cantharidus opalus</i>		4		1986
<i>C. purpureus</i>		4		1986
<i>Cellana denticulata</i>		4		1983
<i>C. ornata</i>		4		1993
<i>C. radians</i>		4		1993
<i>C. stellifera</i>		4		1993
<i>Charonia lampax capax</i>	*	2	20'	1987
<i>C. l. rubicunda</i>	*	2	50'	1991
<i>Cominella adspersa</i>	*	4		1986
<i>C. virgata virgata</i>		4		1986
<i>C. maculosa</i>	*	4		1991
<i>Cookia sulcata</i>	*	3		1991
"		4		1986
<i>Diloma (F.) bicanaliculata</i>	*	4		1991
<i>Eatoniella (Dardanula) olivacea</i>		1	80'	1986
<i>E. (D.) limbata</i>		1	80'	1986
<i>Emarginula striatula</i>	*	1	90'	1984
<i>Epitonium minora</i>	*	1	100'	1983
<i>Estea semisulcata</i>	*	1	80'	1986

<i>Fusitriton retiolus</i>		4+		1991
<i>Glaphyrina caudata</i>	*	1	167'	1993
"	*	2	90'	1986
<i>Globisinum drewi</i>	*	2	20'	1987
"		4		1984
<i>Haliotis australis</i>	*	4	1/t	1986
<i>H. iris</i>	*	4	1/t	1986
<i>H. virginea virginea</i>	*	4	1/t	1986
<i>Herpetoma alacerrima</i>		1	96'	1987
<i>Homolopoma (A.) fluctuata</i>		1	80'	1986
<i>Lepsiella albomarginata</i>		4	1/t	1984
<i>Lepsithais lacunosus</i>		4	1/t	1984
<i>Linopyrga r. rugata</i>		1	100'	1983
<i>Liotella poylpleura</i>		1	100'	1983
<i>Maoricolpus roseus</i>	*	1	70'	1991
[including white form]				
<i>Melagraphia aethiops</i>		4		1993
<i>Microelenchus elongatus</i>		1	145'	1993
<i>M. tenebrosus</i>		3	6'	1990
<i>Neoguraleus amoenus</i>		1	96'	1987
<i>N. murdochi</i>		1	90'	1984
<i>N. sp.</i>		1	90'	1984
<i>Notoacmea p. pileopsis</i>		4		1983
<i>N. p. sturnus</i>		4		1986
<i>Nozema emarginata</i>		1	80'	1986
<i>Odostomia incidata</i>		1	100'	1983
<i>O. spp.</i>		1	80'	1986
<i>Penion sulcatus</i>		1	80'	1986
"		2	80'	1993
<i>Pisina semisulcata</i>		1	100'	1983
<i>Phenatoma rosea</i>		1	167'	1993
<i>P. zelanica</i>		1	90'	1994
<i>Philine auriformis</i>		1	102'	1987
<i>P. powelli</i>		1	80'	1986
<i>Porieria zelandica</i>	*	1/3	8'-167'	1988/86/93

<i>Radiacmea inconspicua</i>	*	on <i>Haliotis iris</i>	1993
<i>Rissoina chathamensis</i>		1 100'	1983
<i>Scutus breviculus</i>	*	4 1/t	1986
<i>Seila terebelloides</i>		1 80'	1986
<i>Sinezona laqueus</i>		1 100'	1983
<i>S. lyallensis</i>		1 80'	1986
<i>Splendrillia</i> sp.		1 100'	1984
<i>Splendrillia</i> sp.		1 167'	1993
<i>Splendrillia</i> sp.		1 102'	1987
<i>Struthiolaria papulosa</i>		1 108'	1986
<i>S. papulosa</i> - <i>gigas</i> form		1 108'	1986
<i>S. (Pelicaria) vermis vermis</i>		1/3 108'/8'	1986/91
<i>Tanea zelandica</i>		1 100'	1993
<i>Taranis nexilis bicarinata</i>		1 80'	1986
<i>Tomopleura alba</i>		1 80'/90'	1986/84
<i>Trichosirius inornatus</i>		1 120'	1985
<i>Trochus tiaratus</i>		1 145'	1993
<i>Trochus viridis</i>		1 80'	1986
<i>Turbonilla (Chemnitzia) aoteana</i>		1 100'	1983
<i>Turbonilla (C.)</i> sp.		1 80'	1986
<i>Turbonilla (T.) suteri</i>		1 100'	1983
<i>Tugali elegans</i>		1 102'	1985
<i>Tugali suteri</i>		1 102'	1987
<i>Turbo smaragdus</i>	*	3 8'	1984
<i>T. (Modelia) granosa</i>		4	1986
<i>Xymene ambiguus</i>		1 90/108'	1985/87
"	*	2 80'	1991
<i>Xymene gouldi</i>		1 90'/100'	1981/84
<i>Xymene huttoni</i>		1 90'/100'	1986/90
<i>Xymene traversi</i>		1 145'	1993
<i>Xymene mortenseni</i>		1 96'	1987
<i>Xenophalium pyrum</i>		4	1986
<i>Zcacolpus pagoda</i>		1 100'	1985
<i>Zcacolpus vittatus</i>		1 80'	1986
<i>Zeradinia producta</i>		1 80'	1986

<i>Zemitrella s. sulcatus</i>	1	120'/145'	1989/93
<i>Zegalerus tenuis</i>	1	80'	1986
<i>Zeacumantus lutulentus</i>	4		1986
<i>Zeacumantus subcarinatus</i>	4		1986

SCAPHOPODA

<i>Cadulus delicatulus</i>	*	1	90'	1986
<i>Dentalium nanum</i>	*	1	120'	1985
<i>Dentalium zealandicum</i>	*	1	120'	1985

BIVALVIA

<i>Anisodonta galata</i>		1	96'	1987
<i>Aulacomya maoriana</i>		2	70'	1993
<i>Borniola reniformis</i>		1	100'	1983
<i>Barbatia novaezealandiae</i>		1	100'	1984
<i>Bassina yatei</i>		3	8'	1987
<i>Cardita aoteana</i>		1	80/100'	1985/83
<i>Chlamys dieffenbachii</i>	*	1	60'	1991
<i>C. deffenbachii</i> - <i>zealandona</i> form	*	1	80'	1991
<i>Chlamys gemmulata</i>	*	2	70'	1991
<i>Cleidothaerus albidus</i>		1	96'	1987
<i>Chione (Austrovenus) stutchburyi</i>		4		1983
<i>Cuna (Volupicuna) mayi</i>		1	100'	1983
<i>Cuspidaria willetti</i>	*	1	90'	1986
<i>Corbula zelanica</i>		1	90'	1986
<i>Divaricella huttoniana</i>		1	100'	1983
<i>Diplodonta globus</i>		1	80'	1990
<i>Dosinia greyi</i>		1	80'	1986
<i>D. lambata</i>		1	145'	1993
<i>D. subrosea</i>		4	1/t	1986
<i>Dosina z. zelandica</i>		1	145'	1993
<i>Eulimella</i> sp.		1	100'	1983
<i>Evalca</i> sp.		1	100'	1983
<i>Enucula strangei</i>		1	100'	1983
<i>Gari hodgei</i>		3	8'	1989

[including white form]

<i>G. lincolata</i>		3	8'	1989
<i>G. stangeri</i>		4		1986
<i>Gregariella barbata</i>	*			1990
[living inside umbilicus of <i>Astraea heliotropium</i>]				
<i>Glycymeris laticostata</i>	*	1	80'	1986
<i>G. modesta</i>	*	1	80'	1986
<i>Genaxinus cookianus</i>		1	100'	1983
<i>Gonimyrtea concina</i>	*	1	90'	1986
<i>Hiatella arctica</i>	*	1	100'	1986
<i>Kellia cycladiformis</i>		1	145'	1993
<i>Leptomya retiaria</i>	*	1	96'	1987
<i>Limatula maoria</i>	*	1	145'	1993
<i>Lithophaga truncata</i>		1	96'	1987
<i>Modiolus areolatus</i>	*	1	100'	1984
<i>Melliapteryx parva</i>		1	100'	1983
<i>Mesopeplum convexum</i>	*	1	100/145'	1985/93
<i>Modiolarca impacta</i>		4		1993
<i>Myadora antipodum</i>		1	90'	1985
<i>M. novaezelandiae</i>		1	100'	1986
<i>M. striata</i>		3	6'	1986
<i>Neilo australis</i>	*	1	120'	1985
<i>Notirus reflexus</i>		1	100'	1986
<i>Notocallista multistriata</i>	*	1	80'	1986
<i>Nucinella maoriana</i>	*	1	90'	1983/89
<i>Nucula hartvigiana</i>	*	1	90'	1986
<i>N. nitidula</i>	*	1	90'	1986
<i>Oxyperas elongata</i>		1	145'	1993
<i>Offadesma angasi</i>		3	8'	1990
<i>Ostrea charlottae</i>	*	1	80/167'	1986/93
<i>O. lutaria</i>		1	80'	1986
<i>Parvithracia suteri</i>		1	100'	1986
<i>Paphies australis</i>		4		1986
<i>Panopea smithae</i>		1	100'/145'	1986/1993
<i>P. zelandica</i>		4		1985
<i>Pecten novaezelandiae</i>		2	25'	1987

<i>Pholadidea spathulata</i>	1	80'	1986
<i>Protothaca crassicosta</i>	4		1993
<i>Pleuromeris zelandica</i>	1	96'	1987
<i>Saccella bellula</i> *	1	96'	1985
<i>Scalpomactra scalpellum</i>	1	90'	1986
<i>Tawera spissa</i>	1	80'	1985
<i>Tellina charlottae</i> *	1	90'	1986
<i>T. edgari</i>	3	8'	1986
<i>T. liliana</i>	3	8'	1986
<i>Theora lubrica</i>	1		
<i>Thyasira r. neozelanica</i>	1	80'	1986
<i>T. peregrina</i>	1	90'	1986
<i>Thracia a. novozelanica</i>	1/2	60/90'	1991/86
<i>T. vegrandis</i>	1	96'	1987
<i>Venerupis largillierii</i>	1	80'	1981
<i>Yoldiella powelli</i>	1	96'	1987
<i>Zenatia acinaces</i>	1	80'	1986
"	4		1987
<i>Zearcopagia disculus</i>	1	65'	1991

BRACHIOPODA

<i>Notosaria nigricans</i>	1	100'	1985
<i>Neothyris lenticularis</i>	1	100'	1993
<i>Calloria inconspicua</i>	1	90'	1985
<i>Terebratella sanguinea</i>	1	70'	1981

A NOTE ON NUDIBRANCHS AND ANASPID

A number of species of nudibranchs and the anaspid *Aplysia* were seen. They are often especially difficult to see because of their merging colouration. Also their identification seems to be quite a specialist business so as I haven't studied the group in detail my naming may be away out but it's a start. The following are those I've noted at present -

Aplysia juliana - 30 mm, chocolate to red maroon. I took a video of this one during a night dive in Tory Channel.

Archidoris wellingtonensis - 200 mm long, khaki with cream round lumps.

Glossodoris [*Chromodoris*] *amoena* - 30 mm, slender, bright pink spots, collected off a rock face at 70 feet outside of Tory Channel south of the entrance in the first bay. I have it recorded on video also.

? *Glossodoris* [*Chromodoris*] *aureomarginata* - 50 mm, colouring white to cream with darker greyish streak on top of body, two fairly thick rhinophores, a fairly common species but identification not very certain.

A WHOPPER OF A BIVALVE: THE STORY OF *ACESTA* (LIMIDAE)

By Elliot Dawson

Yes, we do have bigger bivalves around New Zealand; think of our horse mussel, *Atrina*, for instance - and we've all seen the photograph, at least, of Bruce Marshall's "mighty mussels", some 200 mm in length, as revealed in *The Evening Post* of 26 October 1994, collected from 900 m on the methane springs off Cape Kidnappers. However, as shell collectors, we may be more used to thinking about members of one or other shell family as being all about the same size. No? But it's nice if they're made that way to fit in our drawers!

We know our "File shells", *Lima*, *Limatula*, and some others, quite well so it might come as a bit of a surprise to those of us who have not yet had the thrill of handling them in the Museum's cabinets to find a "giant" among the Limidae - what I called a whopper when I first saw one locally.

The presence of a giant file shell in the New Zealand Region has been known for a long time - certainly so far as fossils are concerned. Following after their description of a new fossil species (not formally named) from the Chatham Islands, Alan Beu and Philip Maxwell (1990: 91) conveniently summarised the species of giant Limidae known as fossils in New Zealand -

"Only three nominal species of *Acesta* have been described from New Zealand - *A. imitata*, which has narrow but definite radial costae over most if not all of the exterior; *A. regia* (Whaingaroan?, Seal Rock, Woodpecker Bay, Southwest Nelson) with definite radial costae near the anterior and posterior margins but only grooves medially; and *A. levitesta* (Waitakian, Milburn Quarry, Otago, widespread), which is almost smooth except for a few weak ribs or grooves near the margins. All are large (height 150-210 mm) and thin-shelled and are rarely collected in anything like a complete condition, so the range of variation and limits of these nominal species are poorly known. In New Zealand the genus is recorded fossil from Haumurian (Late Cretaceous) to Mangapanian, and Recent from the bathyal zone ... The modern species is very similar to *A. levitesta*. Most overseas species of the genus are bathyal ... New Zealand fossil occurrences are mainly from limestone, marl and greensand inferred to have been deposited in moderately deep, offshore waters."

Alan Beu (1973: 315) had earlier said - "Upper Tertiary specimens all resemble *A. levitesta* which thus may have a time range of lower Eocene to Pliocene, and perhaps to Recent." I have looked at specimens other than those which he listed, including one well-nigh perfect pair of valves, but without being able to see the beak or the cardinal area well enough to make any valid comparison with the living form from present-day New Zealand waters. The external shell morphology is to me, however, sufficiently different from the majority of Recent specimens which I have handled to make me believe that to-day's living species is distinct.

It's been far too long, even as Science slowly grinds on, since the first living giant limid was found in New Zealand waters and still has not been formally described - and I plead guilty to not accelerating the intention which Beu & Climo (1974: 310) recorded of me! So here is a little story about it now, an interim account before the formal paper appears. But it might whet your appetite to see and handle a specimen or two of this "whopper" ...

Our New Zealand present-day species has already been illustrated: first in a rather obscure publication (resulting from a cruise on which I collected the specimens) - the report of the Japanese research vessel *Kaiyo Maru* in New Zealand waters (Japan Fisheries Agency, 1972: Vol. 2: 195, 196, 197, 284, fig. 51) - collected on the Campbell Plateau south of New Zealand; and, then, in a rather more accessible place - the *National Museum Records* - by Dick Dell (1978: figs 7-8) who cited it as the host of his new capulid *Capulus novaezealandiae*. It is interesting, here as an aside, to note that a *Capulus* has now turned up off Chile on a similar *Acesta* (McLean & Andrade, 1982).

Quite a few species of giant limid have been described, mainly placed now in the genus *Acesta* (or sometimes as a subgenus of *Lima*), although the allied genus *Ctenoides* (which is, I believe, represented [with another new *Acesta* ?] in far northern New Zealand waters according to N.Z. Oceanographic Institute specimens) also boasts some quite large members.

In 1779 Fabricius described a huge kind of file shell from Norway as *Ostrea excavata*, later placed in *Lima* and now in *Acesta*. This was the first-known of the so-called "giant" limas as Dall and others were to call them. This species was subsequently found to be widely distributed from the Newfoundland fiords to Iceland and Norway to the northern coast of Spain through the Western Approaches of the Atlantic to the Azores and the Canary Islands, and quite recently was recorded as first subfossil and now living specimens in the Mediterranean. In almost every instance its occurrence coincided with the presence of banks of cold-water coral, particularly in the Norwegian fiords (Verkruzen, 1872; Dons, 1943; Thorson, 1971). As recently as 1969 a subspecies was described from the Gulf of Marseille in the Mediterranean as *Acesta excavata sublaevis* by Nordsieck (1969: 59, pl. X, fig. 36.23 - see also Lucas, 1980: 4-5, 9, figs).

In recent years there has been a series of papers dealing with the Pleistocene history of the Mediterranean in which subfossil, and later living, records have been reported of *Acesta excavata* associated white coral banks (e.g. Bourcier & Zibrowius, 1969; Ghisotti, 1979; Rocchini, 1983; Carcassi, 1993). It is interesting, in passing, to see that the gastropod *Iphitus* reported in coral associations in Cook Strait by Beu & Climo (1974) and Beu (1978) has now turned up in apparently similar coral associations in the Mediterranean to the south of Sicily (Taviani & Sabelli, 1982).

In 1963 Vokes reviewed the known species of giant limids, fossil and living, defining (as a subgenus) *Acesta* H. & A. Adams, 1848 in this way -

"The animals referred to this subgenus have relatively large but comparatively thin shells with a cardinal area that is narrower than that of *Lima* (*Lima*) and is situated mainly posterior to the umbones. The anterior auricle is greatly reduced through the encroachment of the excavate lunule. The posterior position of the cardinal area results in the development of a markedly oblique ligamental pit. The ornamentation of weak, rather irregular radial ribs is more strongly developed on the anterior and posterior portions of the valves, but is fine to almost obsolete on the medial portions of the surfaces where it has an aspect suggestive of shallowly impressed, irregular grooves, rather than of true ribs. The weak ornamentation and the strongly oblique ligamental pit serve at once to distinguish *Acesta* from *Lima* s.s."

A summary of the genera of Limidae with their taxonomic diagnoses can be found in the account by Cox & Hertlein (1969: N385-N389, figs C104-C105).

Vokes's catalogue listed (as of 1963) 13 Recent (living) species - Atlantic, 2, E. Pacific, 3, W. Pacific, 6, Indian Ocean, 2 - and 31 fossil species and varieties from the Tertiary of North America, Asia, New Zealand, and Europe. Since that time a number of other living species have been described as well as other fossils, and the hitherto-known geographic and depth ranges of several previously described species have been substantially extended, notably *Acesta rathbuni* and also *A. philippinensis* both being now known from Australian waters (Slack-Smith, 1980, 1982; Loch, 1989). Several giant limids have now been beautifully illustrated in colour in shell books and such popular publications such as the various Japanese encyclopaedias. Particularly good figures appear in Springsteen & Leobrera (1986) on Philippine shells and a nice series is portrayed in Matsukuma *et al.* (1991: 144, pl. CXLII, fig. 2, *Acesta citrina*, fig. 3, *A. rathbuni*, fig. 4, *A. smithii*; 145, pl. CXLIII, fig. 1, *A. virgo*, figs 4-5, *A. goliath*).

Many of the living species of *Acesta* are regarded as very rare, some still being known only from the original single type specimen, and some have not been well illustrated if at all. Vokes (1963a: 82) referred to *Acesta patagonica* as "this yet unfigured species." He, however, was unaware that Carcelles (1947) had already illustrated it from his series of six specimens

collected off Tierra del Fuego in 1935 (one of which I have). Nonetheless, the second illustration of this species only appeared in 1968 (Osorio, 1968) with two more figures given more recently by McLean & Andrade (1982) when they showed *Capulus ungaricoides* (Orbigny, 1841) on a shell of *Acesta patagonica* similarly placed as in Dell's (1978) photograph of the New Zealand *Acesta* host. These figures are important for us because of the close resemblance of this southern South American species to ours.

Of all the living species of *Acesta* the best known (and not so very well at that!) are *A. excavata* from European seas and *A. goliath*, a Japanese species with a rich fossil history and relatives. And, quite surprisingly, one of the better-known is now *Acesta rathbuni*, a hitherto "rare" species which is now revealing itself to our delight! Its story follows in a moment ...

However, of all these the best-known in numbers, at least, is our own New Zealand species of *Acesta* - only comparatively recently found but with its trio of palaeontological relations to set it in place. The number of specimens of our living *Acesta* is now quite substantial as testified by the collections of the Museum of New Zealand and the N.Z. Oceanographic Institute as well as those in a few private collections. The following story relates something of the history of the New Zealand *Acesta* and its relations -

In 1964, during my time with the N.Z. Oceanographic Institute, I first recognised a giant limid amongst bottom samples collected south of New Zealand by my colleague the late Ivan Estcourt. It was a fine whole live animal - a whopper of a shell to my eye used to looking at *Limatula* or even *Lima colorata*. I had the pleasure of showing it to the late Dr Jack Marwick who was visiting the NZOI at the time. He shared the excitement with me and, of course, knew its fossil relations as he had dealt with them (as *Callolima*) in his 1943 paper to which he alerted me.

Very soon after this initial discovery I came to know *Acesta* rather well collecting it at many of the oceanographic benthic stations which we did to the southeast and far south of New Zealand, largely in the Subantarctic region where I had a research project. Almost always *Acesta* was found associated with banks or growths of cold water corals such as *Goniocorella dumosa*, *Caryophyllia profunda* and *Desmophyllum cristagalli* - in fact, the southern equivalents of the *Lophelia* and *Madrepora* reefs of the Northern Hemisphere. I had the privilege in 1963 of having Dr Donald Squires, then the world authority on cold water corals, on one of my cruises. East of the Auckland Islands, one night, we discovered from the tracings of the echo-sounder evidence of what turned out to be the first-known cold-water coral bank in the Southern Hemisphere - I think I would have missed interpreting the significance of those traces had it not been for Don Squires - but the documentation was done (Squires, 1965), dredgings proved the coral composition of the bank - and this set the scene for subsequent realisation that such structures, of varying stages of growth, were a predominant feature of the deep sea floor around New Zealand, and *Acesta* could almost always be found in such places. Particularly rich hauls were made later on over the Chatham Rise when we were mapping the deposits of phosphorite there which were thought to have great commercial potential for our agricultural economy (and, rather surprisingly, this proposition has just been raised again - Atkinson, 1995). My particular interest in this project was the likely effect of deep sea mining on the animal life on the seabed (Dawson, 1984). We certainly got a lot of *Acesta* through this survey; it's amazed me since that we didn't pick up an odd valve long before on the Chatham Islands 1954 expedition.

Closer to home, Alan Beu and Frank Climo (1974: 309-310, table 1) recorded a live juvenile *Acesta* (7.5 mm) from a bank of the coral *Goniocorella dumosa* on Tertiary siltstone in 448 to 512 m on the edge of the Turakirae Trench in Cook Strait and documented the other fauna associated in this habitat. We were also to find that such trench or submarine canyon edges (including the canyons off Hokitika and Kaikoura) were good places for coral growth, and again *Acesta* was there. I have even had live *Acesta* from a proper set net in 290 m off the

Kaikoura Canyon (? evidence of the swimming ability of the Limidae - compare Bondarev's (1990) observations cited below).

Relating to Frank Climo, I must digress here to relate how the Museum of New Zealand got its first large specimens of the New Zealand *Acesta* - by Frank, while visiting a Russian trawler in port and seeing the crew using lots of huge shells trawled in 432 m off the Bounty Islands as ash trays ... I think a few bottles of beer secured a representative series for the Museum!

Over time I managed to build up a good comparative reference collection of giant limids - a few real specimens from overseas but mainly illustrations made by photocopying the shell itself, including holotypes from overseas museums. The shape of the giant limid valve lends itself to this method of recording very well and we found later it was the quickest way of tracing shell profiles for mathematical shape analysis. Classic studies were made a long time ago by Arkell (1926) attempting to define the variation evident in the Jurassic giant limid *Plagiostoma mutabilis* where he developed an index for measuring the obliquity of the shell, a special characteristic of our big limids. Cox (1943) followed with similar work in which he discussed the inflation of the valves and he commented on the differences evident in the cardinal area (both features of our shells also). Aoki (1956) also did some mathematical analysis of *Acesta goliath* in Japan. To-day's world of photocopiers, computers and digitisers would have made Arkell's pioneer work a lot less tedious to say the least. Several more modern attempts to define shape have been using such objects as bivalve shell (as well as archaeological artifacts, plant leaves, and so on), often by the application of fearsome-sounding mathematical techniques like the use of Fourier analysis or polar coordinates and curve fitting by Tchebychev polynomials (e.g. Gevirtz, 1972 and Rogers, 1982). Simpler statistical methods of univariate or multivariate analysis have also been usefully applied to bivalve shells (e.g. Kotrla & James, 1987). Other methods such as the use of radiographs (Oxnard, 1980) or Moiré topography as has been successfully used for studying the morphology of crab shells (Takeshita *et al.*, 1978) seem worth trying on bivalves also. One my colleague at the Museum of New Zealand, Foss Leach, experienced in archaeological aspects of shape delineation, has been developing with me a computer programme which we have, strangely-enough called "shellshow", in a trial run to elucidate the variability of the giant limids. The results may have some significance related to functional morphological work on bivalves as Savazzi (1978), Seilacher (1894) and others have done. The variations in radial shell ornamentation, especially with growth, in the giant limids also merits special study (cf. Hayami & Okamoto, 1986).

I had got quite used to the idea of giant limas being rare (apart from the numbers we were finding in New Zealand waters) - so imagine my amazement when, in August 1981, I saw in the window of a tourist shop in Rarotonga a pair of valves of a yellow-coloured giant *Lima* mounted on a polished wooden block. *Lima dalli*! - right out of the pages of the *National Geographic* away back I thought. I rushed into the shop and asked how much ... "\$10" I was told. "I'll take it." And then (hopefully) - "I don't suppose you've got any more?" Out the back went the shopkeeper returning with a large box of assorted valves and pairs. "I'll take the lot!" I breathed, hardly believing what I saw there - and at \$3 cut-price. This was, indeed, *Acesta rathbuni* (*Lima dalli* being a name of untraced origin used by Platt in his 1949 *National Geographic* article). The specimens had come from 360 metres off Tanglo, Bohol Island, in the Philippines, probably taken in a Nautilus trap.

Interestingly, the shopkeeper (who was delighted to move his entire stock of a shell that hadn't sold at all at its originally much higher price) explained to me that he thought them "expensive for their size and looks" although they had been exported to him as rare and valuable. He later wrote: "I must admit I had had them in stock for a couple of years and decided I would have to have yet another reduction in price. To the average person who collects shells just because they are pretty these shells do not appeal ... " Well, here was a new source of supply of what was still thought of as a very rare shell. But the market, somewhere, must have got flooded because

about a year later I received a shell dealer's catalogue from the Philippines which listed "*Lima dalli*" at US\$4.00 - but I had still got a bargain, let alone a big thrill.

Acesta rathbuni was originally described by Bartsch (1913: 237, pls 16-17) in the genus *Lima*, subgenus *Callolima*, from 293-411 m off Jolo, in the Philippines. It has since been found not only to be the largest living limid but also the most widely-distributed, now having been recorded as far off as Western Australia (Slack-Smith, 1980, 1982; see also the coloured plate in Lamprell & Whitehead, 1992: pl. 16, fig. 2). It has been well illustrated also by Springsteen & Leobrera (1986: 301, pl. 86).

After my experience in Rarotonga, I found that Roworth (1978) had related how *Acesta rathbuni* has always been regarded as a rare and elusive shell, citing Platt's article in the *National Geographic* which had illustrated it as one of the world's rarest shells. Roworth then stated how he had found *Acesta rathbuni* recently listed for sale by a U.S. dealer, several specimens having been taken in Nautilus traps in 200 to 300 fathoms off Bohol in the Philippines (the same locality that my Rarotonga shop specimens had come from!). Unfortunately he didn't quote the dealer's price but I'm sure he would have commented had it been as low as US\$4.00.

Callolima was a name used to include the Philippine species that are weakly sculptured with a narrow oblique ligamental pit even as adults. The shape of the ligamental pit appears, as Woodring (1938: 48) commented, "to depend on the width (distance from umbo to lower edge of chondrophore) of the cardinal area, and the species that have a narrow anterior cardinal area also have a narrow anterior impressed area ...". He concluded that *Callolima* does not differ essentially from *Acesta*. Nevertheless, the narrower-shaped lightly-sculptured species of *Acesta* found beyond the Philippines present real problems in identification and taxonomic separation from each other - and our New Zealand species is no exception.

Odd records of *Acesta* have caused particular identification problems; for example Bernard (1983: 22, 67) attributed a single valve from Panama Bay (latitude 9° N) in 589 m as "probably a misplaced specimen" of *Acesta goliath*, the Japanese species, rather than *A. patagonica* to which it had been attributed (see also Bernard, 1988: 230). Bernard's records of *A. patagonica* extended from 14° S to 53° S. Dall (1902: 16), after describing *A. patagonica*, commented - "The Patagonian species has an astonishing likeness to *L. excavata* [the European species]." Dall said later (1908: 220) of *A. patagonica* - "This has been called *L. excavata* variety, and also referred to as a variety of the Japanese *L. goliath* Sowerby." He would no doubt have felt much the same if he had seen the New Zealand species even compared with *A. goliath* as shown in Okutani's fine coloured plate (Okutani, 1988: 74, fig. 54) - perhaps the old concept of bipolarity is worth following up even now (cf. Crame, 1993).

Not a lot is known about the ecology of the giant limas. In his study of a new third subgenus (or genus) of *Acesta* called *Costellacesta*, Kauffman (1964: 92-94) outlined what was known about their ecology - very little, but more information is slowly being added; for instance, the observations of Bondarev (1990) during 1984 from a manned submersible in the South China Sea (latitude 10°-11° N) where he found concentrations of *Acesta rathbuni* at depths from 250 to 360 m. Lengths (i.e. heights) of 150 to 250 mm were not uncommon. A correlation of size with depth was found also. He noted:

"The peculiar arrangement of this *Acesta* population was observed as follows: maximum density of 1 specimen per 5 square meters in depth of 320 to 360 meters; there were only mature specimens (lengths of 15-25 cm) here; deeper water held large specimens too, but their density was only 1/5 to 1/10th with increasing depths; from a depth of about 320 meters up to a depth of 250 meters the density of *Acesta* specimens and their size gradually decreases. In depths of from 250 to 260 meters there are only small specimens (lengths to 3 cm), these adhering to some firm object by a byssus. Specimens of 5 to 10 cm length are the most active of all sized

specimens observed; they are, by a flapping of the valves, able to rise more than two feet above the bottom. Specimens larger than 15 cm lie, as a rule, motionless on the bottom."

Probably the figure and comments given by Arthur (1989: 55) also refers to these observations. No wonder that *Acesta rathbuni* is no longer "rare"! On the local scene the availability of live *Acesta* off Kaikoura could provide welcome material for anatomical studies such as Gilmour (1990, and earlier work) has done overseas, and there might also be a chance to observe swimming habits, carry out breeding experiments, elucidate growth rates and so on, including, perhaps, comparative studies on byssal adhesion (cf. Waite, 1983). I have kept them alive in an aquarium from this source quite well.

The question of size - these are giants in their family indeed - is still intriguing. Nicol (1964) believed that temperature was the most important single factor contributing to the size of bivalves and concluded, among other points, that "When a single species of pelecypod [i.e. bivalve] has a wide geographic distribution and ranges from warm to cool water, specimens in cooler water will grow more slowly, live longer, and attain a larger size." He noted that the living giant limas come from cool deep water in tropical regions, citing a specimen of *Acesta rathbuni* 213 x 166 x 60 wide, but he noted that large limas occur in the cool waters of nontropical waters also. There is material for investigation here surely as our geographic knowledge of these giants improves.

One of my French colleagues dredged up living *Acesta* on a cruise of the *Marion du Fresne* in 1976 off the Crozet Islands in the southern Indian Ocean (lat. 46° 30' S, long. 52° E.) but he considers it unlikely be the same as the New Zealand species (I'm not so sure). Dick Dell (1981: 3) reported *Acesta* as occurring on the Antarctic-Pacific Ridge halfway between New Zealand and South America taken by the *Eltanin* in 549 m (lat. 54° 49' S, long. 129° 49' W).

Hence I see the taxonomic and biogeographic status of the New Zealand Recent *Acesta* as being analogous to the situation of *Chlamys patagonica delicatula* as postulated by Alan Beu in which he described a pattern of cool-water, circum-subantarctic fauna, the Neoaustral element as Fleming (1979 and earlier) called it, "occurring in two discrete kinds of populations during the two discrete phases of their life cycles - a continuously dispersed, continuously distributed larval population, which provides genetic contact between widely disjunct adult populations." Beu noted that - "Among Mollusca, species in which this pattern occurs include *Aulacomya ater* (Molina), *Mytilus edulis* (Linné), *Chlamys patagonica*, *Argobuccinum pustulosum* (Lightfoot), *Semicassis pyrum* (Lamarck), *Semicassis labiata* (Perry), and *Fusitriton magellanicus* (Röding)." Maybe *Acesta patagonica* (Dall) should be added to this list. On the other hand, Beu & Maxwell (1990: 10) have included *Acesta* as likely being one of the paleoaustral survivors from Cretaceous or earlier faunas of Gondwana (see also Fleming, 1979: 103).

The New Zealand species of *Acesta* is generally consistent in the size, shape and development of its cardinal area and associated structures, contrasting with the lighter build seen in Chilean specimens from off Quintero and Los Vilos which I have, in addition to the characteristically more inflated valves of the New Zealand form. Argentinian specimens (which are much less common in museum collections) are more intermediate in these features. However, some New Zealand specimens from the Chatham Rise are almost impossible to distinguish from the light Chilean examples of *Acesta patagonica*.

I will say nothing here of the origin of our southern *Acesta*, of the regard we may have of it as one of the ancient Gondwana relics or as a latter-day arrival or whether to-day's revived theory of bipolarity as discussed by Crame, (1993) for bivalve molluscs, or even that of panbiogeography, could be developed with the giant limas as a central theme. Perhaps Dall knew a thing or two in 1902!

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[Those marked * will provide readers with further references to their specialised topics]

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FROM THE MUSEUM OF NEW ZEALAND TE PAPA TONGAREWA

Since the last issue of *Cookia* the following papers have been published by Bruce Marshall ...

1993: A review of the genus *Kaiparathina* Laws, 1941 (Mollusca: Gastropoda: Trochoidea). *The Veliger* 36 (2): 185-198.

1993: The systematic position of *Larochea* Finlay, 1927, and introduction of a new genus and two new species. (Mollusca: Gastropoda: Scissurellidae). *Journal of Molluscan Studies* 59: 285-294.

1994: Deep-sea gastropods from the New Zealand region associated with Recent whale bone and an Eocene turtle. *The Nautilus* 108: 1-8.

1994: An unusual triphorid (Mollusca: Gastropoda) from the Moluccas, Indonesia. *Zoologische Mededeelingen* 68: 39-43.

1994: A new species of *Calliostoma* from New Zealand (Mollusca: Gastropoda: Trochoidea). *Molluscan Research* 15: 67-68.

1995: A revision of the genus *Poirieria* Jousseaume, 1880 (Mollusca: Gastropoda: Muricidae) with description of a new species. *The Nautilus* (with R. Houart) - [in press].

1995: Recent and Tertiary Trochaclididae from the southwest Pacific (Mollusca: Gastropoda: Trochoidea). *The Veliger* 38 (2): 92-115.

1995: *Zygomelon zodion*, a new genus and species of bathyal volute from New Zealand. *The Veliger* 38 (2): 145-151 (with M.G. Harasewych).

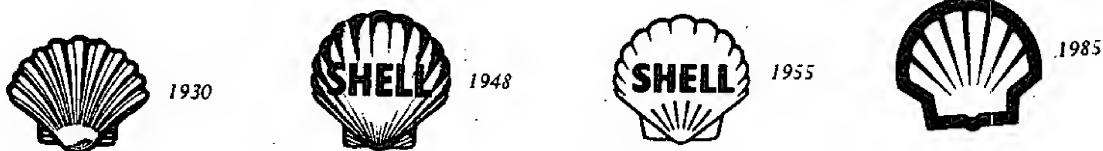
1995: Calliostomidae (Mollusca: Gastropoda: Trochoidea) from New Caledonia, the Loyalty Islands, and the northern Lord Howe Rise. *Mémoires du Muséum National d'Histoire Naturelle* (Série A, Zoologie) - [in press]

***1995:** A revision of the Recent Calliostomatidae of New Zealand (Mollusca: Gastropoda: Trochoidea). *The Nautilus* - [in press].

*Members will have a preview at our National Shell Show of the magnificent plates illustrating this major revision of a family of gastropods much loved by New Zealand collectors. It is very important work and, to say the least, will have collectors running to their drawers and altering their labels to the new and correct names!

"SHELL" - ASSOCIATIONS WITH A FAMOUS COMPANY

By Elliot Dawson



Every shell collector knows the "Shell" logo, of course. Some of us are lucky enough to own a copy of the beautifully-illustrated and thoroughly-informative book *The Scallop. Studies of a shell and its influences on humankind* published by The Shell Transport and Trading Company in 1957 to mark its Diamond Jubilee, sixty years existence of the company. The symbolism of the scallop as a shell logo throughout a very long period of history is well documented therein and makes fascinating reading. If you don't know this lovely book put your name down for it on interloan through your local library. It's good for a long winter night!

In this year of the Wellington Shell Club's 40th anniversary, with our first National Shell Show substantially sponsored by Shell New Zealand Limited, it worth recording the evolution in the New Zealand scene of the "Shell" logo as documented by the Company's history and the changes in style of the Company's characteristic emblem from 1930 to 1985 [the latter design still in use in 1995].

Although the parent company traces its origin back to at least 1833, the Shell Company appeared on the New Zealand scene in 1912 and "Shell" soon became a household word. The company has maintained a real commercial presence from that time on, leading the way, particularly, in promoting unleaded petrol, a move dear to the many New Zealanders concerned about environmental and health hazards. Much important oil source exploration work has been carried out also by Shell over recent years, in association with BP and Todd Oil Company, leading to the discovery of the Kapuni gas field in 1959 and the Maui field in 1969. The first bulk petroleum installation was established by Shell at Miramar in Wellington Harbour in 1926 to which the bulk spirit was transported by the Shell tanker *Murex*. Readers will recall the article on the names of the Shell tankers written by Captain Edmund Busby in *Cookia* 6 (2), March 1989. How appropriate and informative it would be to have a series of photographs (or models) of each of these historic ships alongside a specimen of each of their naming mollusc; perhaps a project for one of our members?

The famous shell logo was born in 1833 when Marcus Samuel began selling antiques and curios from his shop in London's East End. Shell were then much sought after for the households of the time, and Samuel found great profit in trading in shells as part of his business. One of Marcus's sons was also called Marcus. He and his brother (curiously enough called Samuel) carried on the business after father Marcus died in 1870. Young Marcus expanded their interests in the 1880s to include the import of kerosine (probably then called paraffin) and, by 1897, this facet of the business was developed separately as the "Shell Transport and Trading Company Limited", the name "Shell" relating back to the original shell tradings indulged in so successfully by father Marcus from 1833.

The first logo of this new company was, in fact, a rather indefinite sort of mussel shell which was registered in 1900 but, apparently, didn't grip the imagination sufficiently well. What proved to be a much more successful logo was put forward in 1904 as a scallop shell, the design of which has varied little over the years becoming a very well-known and respected emblem. The New Zealand "species" of scallop as we have seen it has become something more stylised

over the years but still reflects its origin as a "shell" immortalising not only the spirit itself but that of its founder Marcus Samuel Esquire of London.

For perhaps as long as the last 30 years (my memory does not recall exactly nor, apparently, can the Shell company), Shell New Zealand has produced fine calendars featuring aspects of the history or wildlife of New Zealand. I was heavily involved with the 1976 one on "Extinct New Zealand Species" as the originator of the subjects selected for each month and adviser on interpreters to develop each theme. The result was a pioneer portrayal of the reconstruction of six subjects of fossil or extinct New Zealand birds and their habitats, a first attempt on the local scene thanks to Shell. This calendar (and many of the others) has now become a collector's item - so if you've still got any of the old ones hang on to them - they're worthy heirlooms.

We are greatly indebted to Shell New Zealand for acting as a sponsor for our first National Shell Show and we look forward to a continuing happy association with the progressive company, so much now a major part of the New Zealand way of life.

Footnote -

Remember this shell ?



Did any of our members get all the red ones ? Never mind; better luck next time!

NELSON IN THE 1980s

By Jill Burnet

You can thank Doreen and Ivan Burr for this article - if they hadn't shifted to Nelson I probably would never have unearthed my records for Tahunanui Beach. Before they went over to Nelson on their house-hunting trip, Doreen and I had a chat about Nelson beaches and I referred her to my article in *Cookia* Vol. 4, Number 2. When she came back she pressed into my hand a list of additional shells that she had found at Tahunanui. It was only then that I belatedly remembered that I had records of shells I had found during visits to Nelson when my parents were living there in the early 1980s. I hunted up the list, updated the names according to Powell, and here it is! These shells were all collected at Tahunanui Beach, at various times of the year, during the period from 1981 to 1985.

GASTROPODS

<i>Haliotis iris</i>	<i>Cookia sulcata</i>	<i>Alcithoe swainsoni</i>
<i>Haliotis virginea</i>	<i>Rissoiopsis varia</i>	<i>Neoguraleus sinclairi</i>
<i>Emarginula striata</i>	<i>Rissoina chathamensis</i>	<i>Duplicaria propelevis</i>
<i>Tugali elegans</i>	<i>Maoricolpus roseus</i>	<i>Epitonium jukesianum</i>
<i>Cellana radians</i>	<i>Zeacumantus lutulentus</i>	<i>Haminoea zelandiae</i>
<i>Cellana stellifera</i>	<i>Zeacumantus subcarinatus</i>	<i>Siphonaria zelandica</i>
<i>Patelloida corticata</i>	<i>Struthiolaria papulosa</i>	<i>Siphonaria cookiana</i>
<i>Notoacmea helmsi</i>	<i>Struthiolaria vermis</i>	<i>Amphibola crenata</i>
<i>Melagraphia aethiops</i>	<i>Sigapatella novaezelandiae</i>	<i>Ophiocardelis costellaris</i>
<i>Diloma zelandica</i>	<i>Zegalerus tenuis</i>	
<i>Diloma subrostrata</i>	<i>Maoricrypta monoxyla</i>	
<i>Cantharidus purpureus</i>	<i>Xymene ambiguus</i>	
<i>Micrelenchus caelatus elongatus</i>	<i>Xymene plebeius</i>	
<i>Micrelenchus sanguineus</i>	<i>Paxula paxillus</i>	
<i>Micrelenchus tenebrosus</i>	<i>Cominella adspersa</i>	
<i>Trochus viridus</i>	<i>Cominella maculosa</i>	
<i>Trochus tiaratus</i>	<i>Cominella glandiformis</i>	
<i>Maurea pellucida</i>	<i>Austrofuscus glans</i>	
<i>Maurea selecta</i>	<i>Buccinulum linea</i>	
<i>Maurea punctulata</i>	<i>Penion sulcatus</i>	
<i>Umbonium zelandicum</i>	<i>Amalda australis</i>	
<i>Antisolarium egenum</i>	<i>Amalda mucronata</i>	
<i>Turbo smaragdus</i>	<i>Alcithoe arabica</i>	

BIVALVES

Nucula hartvigiana
Neilo australis
Barbatia novazelandiae
Glycymeris modesta
Mytilus edulis aoteanus
Perna canaliculatus
Aulacomya ater maoriana
Modiolus areolatus
Xenostrobus pulex
Modiolarca impacta
Atrina zelandica
Ostrea lutaria
Pecten novaezelandiae
Chlamys dieffenbachii
Chlamys zelandiae
Limatula maoria
Monia zelandica
Divaricella huttoniana
Diplodonta globus
Myllita stowei
Kellia cycladiformis
Cardita aoteana
Venericardia purpurata
Nemocardium pulchellum
Macra discors
Macra ovata
Longimacra elongata
Scalpomacra scalpellum
Spisula aequilateralis
Zenatia acinaces
Resania lanceolata
Paphies australis
Paphies subtriangulata
Tellina spenceri
Tellina huttoni

Tellina gaimardi
Tellina edgari
Tellina liliana
Zearcopagia disculus
Gari lineolata
Gari stangeri
Soletellina nitida
Soletellina siliqua
Leptomya retiararia
Dosinia lambata
Dosinia subrosea
Dosinia anus
Tawera spissa
Protothaca crassicosta
Noturus reflexus
Venerupis largillierii
Chione stutchburyi
Dosina zelandica
Bassina yatei
Hiatella arctica
Panopea zelandica
Anchomasa similis
Myadora boltoni
Myadora striata
Offadesma angasi

In addition to these Doreen has found -

Herpetopoma bella
Haustrum haustorium

I hope this list of mine will provide inspiration for Doreen and others to search for further records and collect material for a "10 years later" article.

F.W. HUTTON: HIS NEW SPECIES OF MOLLUSCS

By Elliot Dawson

Hutton is a household name to generations of New Zealand scientists. One can hardly work in any field of natural history in our country without coming across Hutton's pioneer work and, indeed, finding oneself grateful to him for setting out a path of discovery for us to follow.

Frederick Wollaston Hutton (1836-1905) was a great man indeed. Many scientists and biographers, over the years, have paid tribute to him and these eulogies bear testimony to his character and achievements. A picture emerges of a gentle, humble and amiable scholar, an acute observer, a warm friend and co-worker, an encourager of others in science, a disliker of show and humbug and yet a warm critic and strenuous but fair fighter in scientific controversy. However, since I published my collection of remarks made about Hutton (Dawson, 1994), a few strange recollections have surfaced without documentation as to their origin - for example, a recent comment (Strang, 1994: 29) was made of Hutton: "... he was not a good speaker and disliked lecturing. Perhaps because of some war wound, he also had a hasty temper and an abrupt manner." Contrast this with what I have recorded of him in my recent tribute, and you'll see that the task of the historian in science is fraught with problems of reconciliation of the truth.

Be all that as it may, in my recent survey of Hutton's work (including many addresses and comments at meetings - the delivery of which, if Strang's information is correct, must have anathema to his character) lists 620 contributions of various kinds which he made to science during his lifetime. Hutton's descriptive work, aside from his considerable contributions towards understanding the geology of New Zealand, lies around his recognition of hundreds of new species of animals ranging from worms and starfish to blowflies and moas. His reviews of the origin and relationships of the flora and fauna of New Zealand, early contributions to what is now recognised as the science of biogeography, set the scene for the masterly surveys by a latter-day naturalist of equally-wide interests, the late Sir Charles Fleming.

Hutton described a grand total of 885 new species, 60 new genera plus 4 doubtful forms. Of course many of these have fallen by the wayside so far as his names are concerned as subsequent taxonomic work has been done by later workers; but such has not diminished the importance of his pioneering attempt to describe what was to him a new and exciting fauna.

My recent summary of Hutton's work lists all his new species together with the presently-accepted names that are applied to them. For the Mollusca, Hutton described the following -

Amphineura - 7 species; Gastropoda - 321 species, 1 variety, 24 genera; Scaphopoda - 7 species; Bivalvia - 119 species, 2 doubtful taxa, and 1 genus; Cephalopoda - 1 species.

My commentary stated:

"One special problem does arise, however, with respect to some of his new molluscan names, that of priority of publication.

Amongst the aims of the *New Zealand Journal of Science* ... launched in January 1882 ... it was noted that: "Anyone reading an original contribution for publication (in due course) in the "Transactions of the New Zealand Institute", will also secure priority of publication for names, descriptions, &c., by sending an abstract to our columns".

How well this worked out in practice is shown by the fact that a considerable number of molluscs (and one species of brachiopod), the descriptions of which were published in full in the *Transactions* early in the year (usually in May) following their reading before the Philosophical Institute of Canterbury, appeared quickly in abstract form in the very next issue

of the *New Zealand Journal of Science* thus securing the priority mentioned by the Journal's editor ... In most cases these abstracts contain valid descriptions of the proposed new species (and some new genera) which under the International Rules of Zoological Nomenclature ensure their nomenclatural priority. Hence, such taxa, in fact, date from a time up to a year ahead of their more formal appearance in the *Transactions*. In practice, most New Zealand conchologists have taken the *Transactions* date as that of first publication, although in the course of time, following such critical studies as that of Beu & Maxwell and, earlier, Finlay, Marwick, and Fleming, the true dates and nomenclatural validity have been established. Not only did Hutton follow the editor's advice for the *New Zealand Journal of Science* but he followed the same procedure by sending copies of some of his papers to the *Annals and Magazine of Natural History* in London, but for these the question of priority was not so serious. "

The challenge to further elucidate the status of each of Hutton's doubly-published names has now been taken up by Bruce Marshall and we look forward to seeing his summary in print shortly. Meanwhile, those who wish to be informed about which species are in question will be assisted by the cross-references in my table of Hutton's new species.

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FROM NAPIER TO TE PUKE - THE LONG WAY ROUND

By Betty Andrews

This was in January 1970 when my daughter Julie was 13. She and I both loved camping and wanted to go up round East Cape for her holiday but my husband Andy didn't really like primitive living so he agreed that we could go on our own and he would go to his parents in Christchurch.

So with a pup tent each, no flies with them, a lilo and sleeping bags, a few candles and a full picnic basket stowed into my Morris Minor we were away to Napier where we spent the first night with my niece. After a look around Napier it was Mahia by late afternoon. No daylight saving then so by the time we had made camp and had tea it was dark.

We hadn't been long settled for the night when a storm broke. Both our tents leaked very badly so we spent a very uncomfortable night curled up in the little Morris. I gave Julie the back seat. Not a very good omen as had the morning only for shelling and the tide was up, and that high tide followed us most of the way. However, I was rewarded with my very first *Phenatoma novaezelandica* [now = *rosea*] and a number of *Pholadidea tridens*, also new to us.

Then on to Mahunga Bay where we decided to have our late lunch. There was a huge pile of a washup a few days old composed entirely of *Zethalia*. But I did find one broken *Xenophalium labiatum* and, as it was my very first, I kept it. Also there were *Alcithoe fusus* and *Baryspira mucronata*. We were fascinated by the rocks there and we lunched on mussels, tuatua and *Spisula*.

Overnight then at Gisborne and the next stop we had was at Tolaga Bay. The wharf is definitely worth going to see even if our trap for the new *Cominella* then recently discovered by Norm Douglas was not successful. We used golden limpets from the cliffs as bait and so collected their shells. So we baited our trap and took it out to the very end of the wharf and dropped it over. The main interest shellwise here one *Maurea tigris* amongst rocks near the wharf. It was inhabited by a hermit crab which obligingly dropped out when I picked the shell up. As an addition to our lunch again we had mussels and *Spisula*. Nothing at all had touched our trap when we recovered it! We learned a week or so later from Mrs Bill Walker at Waihou Bay and saw a trap identical to that used by Norm Douglas that the bait must be really stinking and preferably fish. We also saw a specimen of the *Cominella* but found it most unexciting.

Tokomaru overnight and we were on to Hicks Bay with a swim at Te Puia hot springs on the way and a detour to Waipiro Bay - a beautiful bay and beach but not a shell in sight! Three nights we had at Hicks Bay but nothing of interest although plenty of big mussels on the rocks. We had all the kahawai we could eat given to us daily by a fellow camper. We couldn't go far afield as I had badly damaged a toe which poisoned after taking a buffeting from the sea when getting big mussels from the partly submerged rocks that I had swum out to on the previous afternoon. High tide there again!

The highlight of the trip was at Waihou Bay where Mrs Bill Walker of the Auckland Shell Club invited us to pitch our tents on her sheltered front lawn straight across from the beach. She made us very welcome and did such a lot to make our stay memorable, showing us the best shelling spots. Her favourite was below a pig sty a little north of her place, and we too found it rewarding. When diving that area once some while prior to our visit she had found a living *Ellatrinia memorata* [now called *Trinia merces*] which she placed in seawater in a large jar and then rang A.W.B. Powell who told her he wanted it kept alive. It was the first live one that had been found. So she told us of the successful fast emergency drive to Auckland and the organising of fresh seawater at various points along the way.

Our best finds were 7 *Ellatrivia memorata* between us, a perfect *Xenophalium labiatum*, a *Mayena australasia* for Julie as well as a number of various rissoids and *Marginella mustelina*. We both took shell sand from below the pig sty home which contained numerous small very colourful shells.

Near Te Kaha, as we headed for overnight at Opotiki, we got one complete *Nemocardium pulchellum*, several bright deep pink *Eatoniella (Pellax) huttoni*, one juvenile *Vicimitra maoria* [now = *Mitra carbonaria*], and more *Marginella mustelina*. Then we went to Te Puke for a few days to stay with my brother and his family before coming home. Not quite the finish of shelling though - at Maketu at a picnic I found another *Ellatrivia*.

OLD SHELL NAMES FOR NEW!

The following publication is available from The Wallypug Press, 17 Kotari Road, Eastbourne 6008, for \$12.50 postfree:

"F.W. Hutton (1836-1905) pioneer naturalist: a bibliography & taxonomic analysis" *Occasional Papers of the Hutton Foundation New Zealand* Number 5. 150 pages. October 1994.

Amongst other things it lists the names of all the molluscan species as originally described by F.W. Hutton and gives their present-day equivalents [see article by Elliot Dawson in this issue of *Cookia*].

A NEW NAME FOR THE "TOE-NAIL" BRACHIOPOD (AND A NEW SPECIES TO WATCH OUT FOR)

By Elliot Dawson

The little red "toe-nail" brachiopod which we know fairly commonly but usually as broken valves on the rocky shore has been known (and illustrated - see Powell, 1987: fig. 54) for many years as *Terebratella inconspicua* or, alternatively as *Waltonia*.

A full listing of references to this species takes up nearly two and a half pages of my New Zealand brachiopod bibliography (Dawson, 1992) and that's already out of date! We ended up by calling it *Waltonia inconspicua* - but now we have to alter the labels in our collections if we want to be up with the play. There's a bit about its biogeography in the report from my talk given at the 1990 International Brachiopod Congress (Dawson, 1991: 436).

My colleague Daphne Lee has recently published (with Dr G.A. Cooper, doyen of Brachiopodology) a scholarly account of why we must use a new name for our little "toe-nail" as I was brought up to call it. I was privileged to be one of those asked to read and comment on this paper in manuscript form, and I can assure would-be readers that not only is it a scientific detective story but it is a very complicated one at that. The following is its abstract -

"The new generic name *Calloria* is proposed as a replacement for *Waltonia* Davidson, 1850, the type species of which is the common smooth endemic terebratulide brachiopod of New Zealand seas. *Waltonia* was based on a juvenile, imperfect specimen of a ribbed brachiopod belonging to an existing genus, and was abandoned by Davidson in 1861. The complex later nomenclatural history of *Waltonia* and *Magasella* Dall is described in detail. A type is selected for *Terebratula inconspicua* Sowerby, 1846, the type species of *Calloria* n. gen." (Cooper & Lee, 1993: 257).

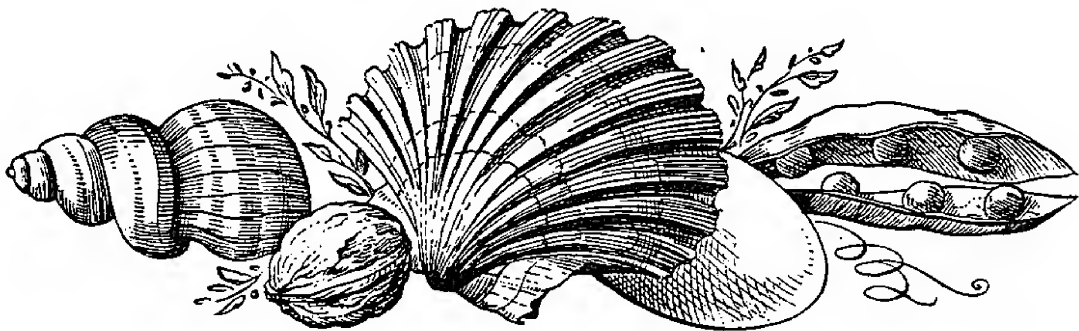
What this means is that our common little red brachiopod must now answer to the name of *Calloria inconspicua*!

In the same journal Dr Cooper has also co-authored (with Peter Doherty, formerly a research student at Auckland University) another paper dealing with a New Zealand brachiopod, a new species also belonging to the newly-proposed genus *Calloria*. While he was doing his theses (1976, 1979) on *Terebratella* [now *Calloria*!] *inconspicua* in northern New Zealand, Peter Doherty recognised another form of the shallow water brachiopod then called *Terebratella* which had a creamish-coloured shell with bands of red radiating splashes, quite different from the rather uniformly-coloured red "Toe-nail." Now 17 years later we have a name for what has been clearly recognised as a new species - *Calloria variegata* Cooper & Doherty. The particular point of interest is that, so far, *C. variegata* is known only from 12 sites north of Auckland. There is, however, a vague possibility that some specimens from Foveaux Strait noted by Thomson (1915), with "pale pinkish-white, with irregular radial splashings" belong to this species also [I would suspect, rather, some mislabelling!]. Anyway, here is a chance for shell collectors working southwards from latitude 37° (just south of Auckland) to watch out for this strikingly-coloured brachiopod. Those of us specially interested in brachiopods would love to hear some news about its real distribution!

The only sad thing about this addition to our brachiopod list is that, although Cooper & Doherty recorded 1234 specimens collected with 300 of them examined, all the type specimens (holotype and 8 paratypes) are noted as "held in the United States National Museum." I thought that sort of thing was discouraged nowadays. Really, before editors of New Zealand scientific journals accept for publication manuscripts describing new species from New Zealand they ought to assert a moral right for such New Zealand-collected type material to be held (at holotype level at least) in the National Collection!

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RECORDS OF SMALL LANDSNAILS FROM MANA ISLAND

By Ian Townsend

INTRODUCTION

Mana Island is a small (217 ha), flat-topped island just over 4 km off-shore from Titahi Bay, Wellington. Its highest point, 121 m, is near the northern end of the approximately oblong-shaped island with its long axis paralleling the mainland.

Mana Island has had a long history of human interference, being settled by Europeans in 1832 who carried out whaling and farming, and, prior to this, there was Maori occupation of the island. Dieffenbach (1843: 112) recorded - "Where trees formerly grew, in the hollows and indentations of the land, the soil is good; the rest is covered by fern, native and artificial grasses, and clover, which are all that can grow in the thin layer of vegetable earth that scarcely covers the yellow schistous clay of which the island consists. But this vegetation is suited for the pasture of sheep, of which there are about 200 on the island, in very good condition." In the 1860s a lighthouse was built on the highest point. At that time the island belonged to the Department of Lands and Survey. Subsequently it was used by the Ministry of Agriculture and Fisheries as a sheep quarantine station from 1973 to 1978, and, then, due to an outbreak of scrapie disease, cattle only until 1986, finally being taken over by the Department of Conservation. A mouse plague, peaking about 1989, was a major biological influence, as was the total elimination of rodents during August to October 1989. The last mouse to be seen was in February 1990.

A detailed botanical survey of the island was undertaken by the Wellington Botanical Society between March 1984 and October 1986 and was published in 1987 (Timmins *et al.*, 1987).

Murray Efford collected a good series of small landsnails in December 1977. The following species were found [the numbers of each in brackets]:

Charopa coma (35), *Charopa pseudanguicula* (5), *Charopa pilsbryi* (5), *Cavellia buccinella* (19), *Cavellia serpentinula* (5), *Mocella eta* (1), *Phenacharopa novoseelandica* (11), *Thalassohelix decudua* (2), *Allodiscus rusticus* (1), *Phrixgnathus phrynia* (9).

In 1985 a small collection of landsnails was made by Ian Cooksley. Species noted then were - *Charopa coma*, *Cavellia buccinella*, *Phenacharopa novoseelandica*, *Thalassohelix decudua* and *Phrixgnathus phrynia*.

During November 1993 and February 1994 a team of biologists carried out a fauna survey of the island for the Department of Conservation, concentrating mainly on insects. However, some molluscs were noted, particularly from the few remaining pockets of native vegetation. As collecting techniques were primarily designed for entomology, it would be fairly certain to conclude that more small landsnails are yet to be found on the island. However, the 15 species listed below are, perhaps, a start towards a more comprehensive survey. Biologists contributing to the molluscan collection were Ian Cooksley, Raewyn Empson, John Nunn, Dougal Townsend and Ian Townsend.

SPECIES FROM MANA ISLAND

HYDROBIIDAE

Potamopyrgus antipodarum (Gray, 1843)

This aquatic snail can often be found as dead shells in litter or amongst stones, as were these records. Found during November 1993 from kanuka litter and coastal forest near Forest Valley, and again in Forest Valley in February 1994.

ENDODONTIDAE

Charopa coma (Gray, 1843)

A common snail on the island, recorded from litter under kanuka, Forest Valley, coastal forest at the entrance to Forest Valley and from under *Aciphylla* near trig in November 1993 and again from Forest Valley in February 1994.

Charopa pilsbryi (Suter, 1894)

Not seen during our latest survey but collected by Murray Efford on 2 December 1977. No doubt this small species is still present.

Charopa pseudanguicula (Iredale, 1913)

One found in litter under kanuka during November 1993.

Paralaoma caputspinulae (Reeve, 1852)

Five specimens found under *Aciphylla* near trig in November 1993.

Cavellia buccinella (Reeve, 1852)

One specimen from kanuka litter and one found under wood in Forest Valley during November 1993.

Cavellia serpentinula (Suter, 1892)

Two found in litter under kanuka.

Mocella eta (Pfeiffer, 1853)

Found in *Phormium tenax*, in litter in kanuka forest and under *Aciphylla* near trig during November 1993. Not uncommon in these habitats.

"*Mocella*" *maculata* (Suter, 1890)

Four found under *Aciphylla* near trig during November 1993.

Phenacharopa novoseelandica (Pfeiffer, 1853)

Two from near the coast at the mouth of Forest Valley in November 1993, and two from Forest Valley in February 1994.

Thalassohelix decidua (Pfeiffer, 1857)

This was one of the commonest snails on the island, being recorded during the November trip from litter under kanuka forest, under *Craspedia* and *Aciphylla* plants from near the trig station, in mixed forest in Forest Valley, and from down near the shoreline under stones at the mouth of Forest Valley. Another specimen was seen in Forest Valley during February 1994.

"*Allodiscus*" *rusticus* (Suter, 1894)

A single specimen from Forest Valley in November 1994. This species was originally placed in the genus *Allodiscus* by Suter and subsequently retained there by Powell but belongs to a distinct genus.

Phrixgnathus phrynia Hutton, 1883

Two from litter under kanuka during November 1993, and one from Forest Valley in February 1994.

"*Paralaoma*" *latcumbiculata* (Suter, 1890)

One from kanuka litter in November 1993.

Otoconcha dimidiata (Pfeiffer, 1853)

Two from Forest Valley, one in November 1993 and one in February 1994.

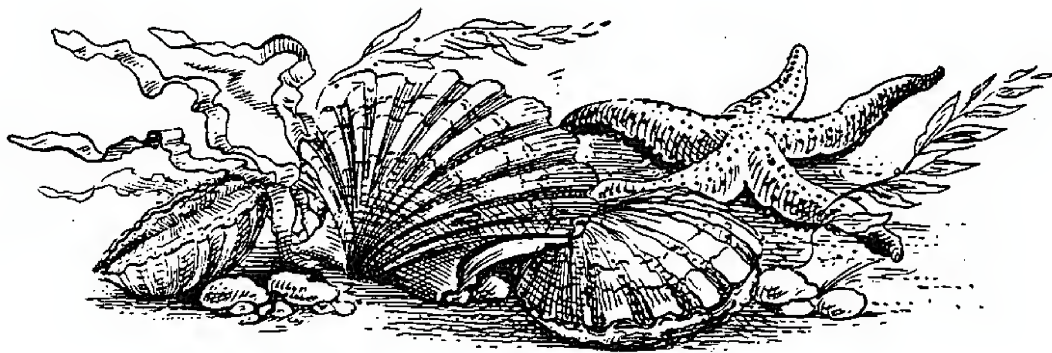
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SOME NEW PUBLICATIONS

The latest issue of *The Veliger*, Volume 38, Number 2, issued on 3 April 1995, contains several articles of New Zealand interest ...

1. MARSHALL, Bruce A. Recent and Tertiary Trochaclididae from the southwest Pacific (Mollusca: Gastropoda: Trochoidea). Pp 92-115;
2. TROWBRIDGE, Cynthia D. New Zealand opisthobranchs associated with the low intertidal crustose green alga *Codium convoluta*. Ascoglossans down under. Pp 116-125;
3. HARASEWYCH, M.G. & MARSHALL, Bruce A. *Zygomelon zodion*, a new genus and species of bathyal volute from New Zealand. Pp 145-151;
4. WILLAN, Richard C. Corrections to type locality and geographical range for three species of Australasian volutes (Volutidae: Amoriinae and Zidoninae). Pp 152-157.

And for those interested in the history of the Brachiopoda -

RICHARDSON, Joyce R. 1994: Origins and dispersal of a brachiopod family - the systematics, biogeography and evolution of the family Terebratulidae. *Proceedings of the Royal Society of Victoria* 106: 17-30.

ANOTHER RECENT PAPER OF NEW ZEALAND INTEREST

JANSEN, P. 1994: Notes on the Australian species of *Calliotropis* (Gastropoda: Trochidae) with descriptions of four new species. *Molluscan Research* 15: 43-53, pls 1-2.

In 1979 Bruce Marshall described a new species *Calliotropis acherontis* collected in 512-549 m off Raoul Island in the Kermadecs from the R/V *Acheron* on the one of the Museum's expeditions. In the above cited paper the range of *C. acherontis* has now been found to extend across the Lord Howe Rise and off New Caledonia to Queensland and New South Wales. A specimen in the collection of the Australian Museum from east of Cape Three Points, N.S.W., is illustrated (pl. 1, figs e-f) and a new diagnosis and description is also given as part of this review of the genus *Calliotropis* Seguenza, 1903 as it occurs in the southwest Pacific.

TITAHI BAY FIELD TRIP 1995

By Jill Burnet

"What a pair of legs!" said Ivan, pulling up beside us just as Jenny was changing out of her trousers. It was early morning on Easter Monday, and Doreen and Ivan were second to arrive at the rendezvous in Titahi Bay. Pat and Graham soon joined us. We got back into the cars, and Jenny said "Follow me." "Follow those legs" retorted Ivan - but he was the one we almost lost as Jenny led the way up along winding roads to a car park on the top of the cliff. Then it was on with packs and sunhats. Jenny had organised perfect weather, the clear fine day that follows a southerly storm. It was pity, however, that we'd had to get drenched the night before even if it was in aid of a good day to come for the Shell Club's trip!

We scrambled down a steep track to the rocky shore below. Jenny pointed to a little hill, Green Point, in the distance which she said was a good place - so off we went. There were stony beaches littered with paua, Cook's Turban and large Dog Cockles as well as rocky headlands and reefs where the keener members of the group went wading in the pools. We went on past Green Point until we came a lovely little sandy beach, Open Bay, where everyone was glad to sit down for a refreshment stop. It was then that we learned why we had been enticed into going there - not to look for shells at all but to search for Jenny's wallet which she had lost on a previous trip. We were unsuccessful in that, but the rocky area at the end of the beach did yield a few different shells such as *Glycymeris modesta* and *Myadora striata*, and it was worth the walk apart from being a delightful spot. That was as far as we went, and we turned back, Pat and Graham going on ahead, the rest of us wandering along picking up more shells with Doreen really lagging behind reluctant to leave any shell unexamined. Jenny proposed another refreshment stop at the top of Green Point but when we had hiked all the way up there we found the air was thick with insects and we decided we didn't want to eat them as well. We went on slowly back to the cars where, thanks to Ivan's thermette, we had a cup of soup and then headed for home. Altogether it was a very enjoyable outing with over 80 different species of shells found. The best find of the day was Pat's *Alcithoe fusus* and the most unusual find was live *Nerita atramentosa melanotragus* at Green Point, a place very good also for large *Glycymeris laticostata* where we all got some unbroken pairs. In addition to the shells listed below, Jenny took a bag of shell sand from the Open Bay area which, once sorted, could provide yet more species.

GASTROPODA

Haliotis iris (live)

Haliotis australis

Haliotis virginea

Tugali elegans

Tugali suteri

Cellana denticulata (live)

Cellana ornata

Cellana radians (live)

Cellana stellifera

Patelloida corticata

Atalacmca fragilis (live)

Herpetopoma bella

Melagraphia aethiops (live)

Diloma zelandica

Diloma bicanaliculata (live)

Cantharidus purpureus

Micrelenchus caelatus elongatus

Micrelenchus dilatatus

Trochus viridis

Maurea pellucida

Maurea punctulata

Turbo smaragdus (live)

Turbo granosus (few)
Astraea heliotropium (few)
Cookia sulcata
Nerita atramentosa melanotragus (live)
Littorina unifasciata antipodum (live)
Rissoina chathamensis
Maoricolpus roseus
Zeacumantus lutulentus
Sigapatella novaezelandiae
Maoricrypta monoxyla
Tanea zelandica (few)
Cabestana spengleri (few)
Argobuccinum tumidum (few)
Mayena australasia (few)
Charonia lampax capax (few)
Thais orbita
Lepsiella scobina (live)

Haustrum haustorium (live)
Cominella adspersa
Cominella maculosa (live)
Austrofuscus glans
Buccinulum linea
Penion sulcatus
Amalda australis
Amalda depressa
Amalda mucronata
Amalda novaezelandiae
Alcithoe swainsoni
Alcithoe fusus
Austromitra rubiginosa
Duplicaria tristis
Siphonaria zelandica
Benhamina obliquata

BIVALVIA

Nucula hartvigiana
Nucula nitidula
Barbatia novaezelandiae
Glycymeris laticostata
Glycymeris modesta
Mytilus edulis aoteanus
Perna canaliculus
Aulacomya ater maoriana
Modiolus impacta
Pecten novaezelandiae
Mesopeplum convexum
Chlamys dieffenbachii
Chlamys zelandiae
Divaricella huttoniana
Myllita stowei

Cardita aoteana
Venericardia purpurata
Zearcopagia disculus
Dosinia lambata
Dosinia subrosea
Dosinia anus
Tawera spissa
Notocallista multistriata
Protothaca crassicosta
Notirus reflexus
Dosina zelandica crebra
Corbula zelandica
Hiatella arctica
Myadora striata

BRACHIOPODA

Calloria [*Waltonia/Terebratella*] *inconspicua*

WELLINGTON SHELL CLUB FIELD TRIP - SEATOUN 1991

By Jill Burnet

Heads down, bottoms up - that was the scene at Point Dorset, Seatoun, on the western side of Wellington Harbour, on the afternoon of Waitangi Day 1991. It seems a long time ago now but the recording of what we did and got, even after some time, is still worthwhile the further effort so here it for future trips to build on ...

This trip was planned and organised by Pat Lakeman and Jenny Raven who had dug out information about previous Shell Club trips in Wellington Harbour and posted it out to members beforehand. On the morning of the 6th I wasn't so sure that they had organised the weather equally efficiently - it was damp and drizzly but it did improve by the afternoon so that, although it remained overcast, it was reasonably warm with not much wind and even an occasional glimmer of sun through the mist. In fact the mist rather added to the atmosphere, enclosing us in a landscape of jagged, contorted rocks thrusting up out of the flat grey sea into a grey sky. The everyday world was blotted out - just the dim outline of Somes Island and the hills across the harbour faintly visible. Unfortunately, the weather was worse up the coast and this deterred the Club's contingent from there. There was a good turnout of members from Wellington and the Hutt Valley in spite of this and we were especially pleased to see Anita Long who had made it from Carterton.

We met at Churchill Park at 2.30 p.m. and wandered round the shore to the Point Dorset area, young Amanda Nunn filling her bag with shells faster than anyone else. As the tide receded, there were plenty of rock pools to investigate. In fact young Michael Nunn investigated one more closely than he had intended and ended up by being not too happy about it. The more intrepid souls who couldn't wait for the tide waded out into the water, assuring the rest of us that it really was quite warm. Most of us, however, wandered round to have a look at Breaker Bay but decided that it was windier there and not so good for shelling. As the afternoon wore on, little groups of members stopped and had tea among the rocks, and by about 5 p.m. the first people began to leave. John Marston turned up for the last hour having driven all the way over from a birthday party at Makara - a really great effort to be with us. Low tide was at 6 p.m. after which those who had stayed the time packed up and called it a day - and a most enjoyable day it was. Our thanks to Pat and Jenny for organising yet another successful field trip for the Club!

SHELL LIST - SEATOUN FIELD TRIP: 6 FEBRUARY 1991

[* live]

*Haliotis iris**

*Haliotis australis**

*Scutus breviculus**

Cellana radians

*Cellana denticulata**

Cellana stellifera

Tugali suteri suteri

Cellana ornata

*Atalacmea fragilis**

Patelloida corticata

Radiacmea inconspicua

Cantharidus opalus opalus

Cantharidus purpureus

Turbo smaragdus

Cookia sulcata

Trochus tiaratus

<i>Trochus viridis</i>	<i>Chlamys dieffenbachi</i>
<i>Micrelenchus dilatatus</i>	<i>Ostrea charlottae</i>
<i>Micrelenchus sanguineus sanguineus</i>	<i>Glycymeris modesta</i>
<i>Cantharidella tessellata</i>	<i>Cardita aoteana</i>
<i>Zediloma subrostrata</i>	<i>Paphies australis</i>
<i>Melagraphia aethiops</i>	<i>Chione stutchburyi</i>
<i>Maurea punctulata</i>	<i>Venerupis largillierti</i>
<i>Diloma nigerrima</i>	<i>Protothaca crassicosta</i>
<i>Diloma zelandica</i>	<i>Tawera spissa</i>
<i>Tanea zelandica</i>	<i>Zearcopagia disculus</i>
<i>Sigapatella novaezelandiae</i>	<i>Gari stangeri</i>
<i>Maoricrypta monoxyla</i>	<i>Gari lineolata</i>
<i>Maoricolpus roseus roseus</i>	<i>Xenostrobus securis</i>
<i>Melaraphe oliveri*</i>	<i>Myadora striata</i>
<i>Melaraphe cincta*</i>	
<i>Argobuccinum tumidum</i>	
<i>Amalda australis</i>	
<i>Amalda mucronata</i>	
<i>Struthiolaria papulosa</i>	
<i>Thais orbita</i>	
<i>Haustrum haustorium*</i>	
<i>Lepsiella scobina scobina</i>	
<i>Cominella adspersa</i>	
<i>Cominella virgata virgata*</i>	
<i>Cominella maculosa*</i>	
<i>Buccinulum linea*</i>	
<i>Buccinulum vittatum littorinoides*</i>	
<i>Siphonaria zelandica</i>	
<i>Serpulorbis zelandicus</i>	
<i>Perna canaliculus</i>	
<i>Modiolus arcolatus</i>	
<i>Mytilus edulis aoteanus</i>	
<i>Aulacomya ater maoriana</i>	
<i>Barbatia novaezelandiae</i>	
<i>Lima maoria</i>	



IN MEMORIAM - PETER JAMIESON 1956 -1995

(A tribute given by Jenny Raven at the funeral of Peter Jamieson, past President and Life Member of the Wellington Shell Club; Friday 28 April 1995, Old St Paul's, Wellington)

Anyone who knew Peter well, or even half well, would know he had a particular passion for shells.

If you visited him, even when he was in hospital at one stage, you had to watch you didn't stumble over a shell. Peter collected shells from a very young age. He told me he had started off collecting everything - insects, the lot. Somewhere along the way he specialised in shells - no doubt much to his family's relief.

Long time friends of Peter's from Whangarei commented that Peter had written and visited them as a boy to go shell collecting, and they had been amazed then at the depth of knowledge and interest that Peter had for the subject at that early stage.

Peter's shell interests meant that he knew people throughout New Zealand and all parts of the world. He was readily accepted by all collectors for his knowledge. When he went to the U.K. he wasn't content to stick with physiotherapy work; he also worked part-time cleaning shells in a London shell shop. He has also been honoured by scientific institutions in having several new species of shells named after him.

Peter had been associated with the Wellington Shell Club since 1982. Within three months he was elected President and in 1987, when he left for overseas, he was elected a Life Member, and currently he was our Vice President.

Members well remember accompanying Peter on field trips to places like Kaikoura in midwinter, Mahia, Karamea, Marlborough, and North Auckland. On such occasions we have memories of him hanging off rocks amidst seals and waves attempting to grab some shell treasure, leading us thigh-deep through icy water to an elusive rock island, crawling through undergrowth or racing round rock bluffs in an attempt to be somewhere by the low tide, and perched on someone's shoulder with a long pole attempting to knock some shell creature off a cave roof.

There was also an occasion when passengers on an intercity bus in the South Island were suddenly startled by the sight and sound of a shell flying through the air from the rear to the front of the bus when Peter, when cleaning his shells at the back, had suddenly found a large spider in one!

Someone mentioned to me the other day how much of a teaching influence Peter had been on them. This is right. Peter didn't take for himself. If he was walking with you on a beach he would suddenly stop and tell you there was a particular shell in front of you, and then patiently wait while you took twenty minutes to find it. He knew shell names and locations and exactly where to look for them, and, for those lucky enough to accompany him, he was generous in imparting his knowledge.

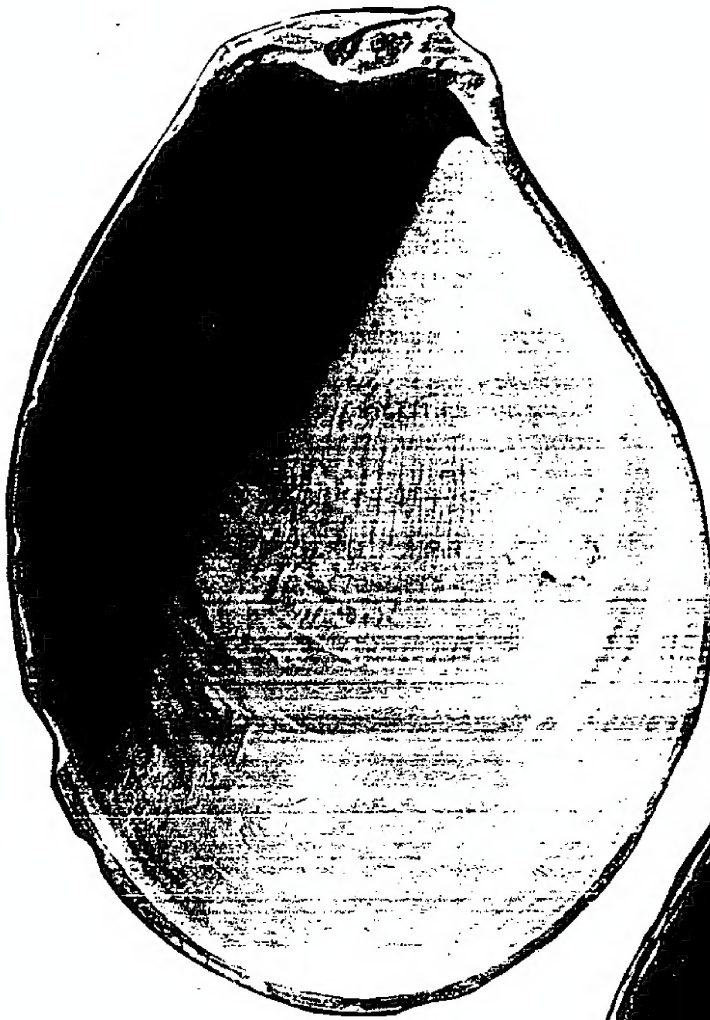
I am sure he knew just about every shell in the vast collection of the Museum of New Zealand and also in most people's private collections. However, if he took a shell off you for trading, you always, somehow, seemed to make on the deal and this added to the friendships he made.

All of this shows you that Peter was something special, a person that all shell collectors worldwide will miss. I don't think this applies only to shells. All people who had contact with Peter will have experienced these special characteristics which he had.

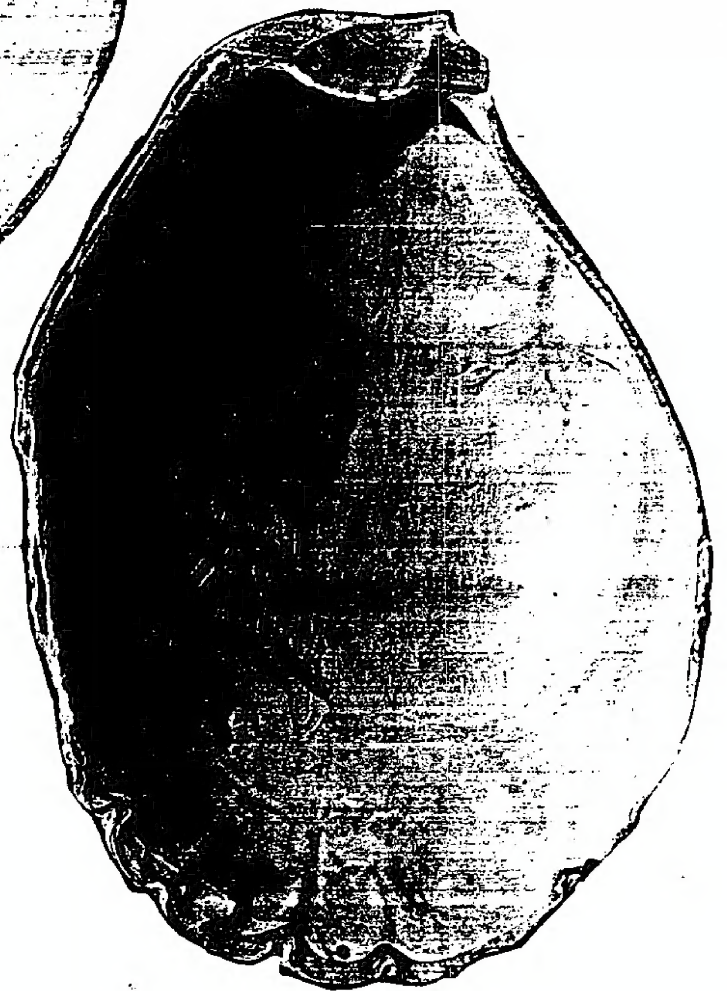
In two weeks, on the weekend of 13-14 May, there will be a National Shell Show upstairs at the Wellington Public Library from 10 a.m. to 4 p.m. each day. For the past year Peter has been working with club members to organise this event. You will all be welcome to attend because the Show will be a legacy to the vision that Peter had for a national shell event and to hopefully encourage new members to take up the hobby he enjoyed so much.

We express our special condolences to Don, and to Peter's mother and his family.

We are all going to miss him very much.



New Zealand *Acesta*



Some smaller specimens of "giant" Limidae

WELLINGTON SHELL CLUB

LIST OF MEMBERS

1995

ANDREWS, Mrs Betty, 32 Stafford Street, Wanganui; 06-344-5480
BEU, Dr Alan, 24 Marina Grove, Lower Hutt; 566-3307
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BUSBY, Capt Edmund, 5 Howard Road, Point Howard, Eastbourne; 568-5958
CLIMO, Dr Frank, 5 Imlay Crescent, Ngaio, Wellington; 479-3829
COOKSLEY, Mr Ian, Dept of Conservation, RD 31, Manakau, Levin; 06-364-3111
DAVIES, Mr Trevor & Mrs Gracie, 14 Vacluse Avenue, Paraparaumu Beach; 04-298-8221
DAWSON, Mr Elliot, 17 Kotari Road, Days Bay, Eastbourne; 562-8912
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WOODS, Mrs Kris, 116 Te Anau Road, Hataitai, Wellington; 386-3311
WOTTON, Mrs Mary, 28 Fairburn Grove, Johnsonville, Wellington; 478-5294

WELLINGTON SHELL CLUB

1995

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Vice President: Peter Jamieson

Secretary: Jenny Raven

Treasurer: Jill Burnet

Editor: Elliot Dawson

Newsletter: Jill Burnet

Librarian: Bevan Dunn

Raffles: Gracie Davies

Membership fees -

Single \$8

Family \$10

Students/Superannuitants \$5

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